

The next Number of
THE LIVING AGE,

FOR JULY 24,



Will contain the first
instalment of a Serial
Story entitled

“THE AMULET,”

From the Italian of “NEERA.”

**This authorized and copyrighted translation is made
for The Living Age by MRS. MAURICE PERKINS.**

In a recent number of the *Revue Bleue*, M. Ernest Tissot speaks of this romance and its author in the following appreciative terms:—

“The Amulet is a romance remarkable for its delicacy of detail, but especially for the freshness of its inspiration.

The distinguished woman whose name appears on these pages is no debutante in literature. Her works already number no less than twenty volumes, not to speak of numerous articles which have appeared in the leading Italian reviews. Her Latin pseudonym of Neera—recalling one of the odes of Horace—seems to appreciate in value from year to year. If the literary career were in Italy what it is in France, no doubt Neera would already hold that place in the first rank which she deserves both for her intelligence and her originality.

The pages of the Amulet will show better than words of mine how truly Neera has earned, with Gabriel d'Annunzio, de Fogazzaro, de Verga and five or six others, a share in that enthusiasm which we feel for the new Italian literature.”

THE LIVING AGE.

Sixth Series, }
Volume XV. }

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{ From Beginning,
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Single copies of THE LIVING AGE. 15 cents.

IN THE SWEET O' THE YEAR.

Merrily piping a carol of mirth,
And of thanks for the life that was
dear;
Glad of the breath of the Spring o'er the
earth,
Sang a bird in the sweet o' the year.

Singing a message of death as it sped,—
Wee is me for the life that we fear—
Swift from the string flew an arrow, and
dead

Fell the bird in the sweet o' the year.

Sunday Magazine.

A SONG FOR LADY DAY.

A home she makes where'er our Lady
goes:
Her bosom is the garden of the rose,
At her approach the Winter turns to
Spring,
Beneath her feet the flowers laugh and
sing
With bloom and fragrance, perfuming the
air,
So glad are they her presence to declare.

With diamond dew the paths she treads
are wet:

The snowdrop pure, the contrite violet,
The primrose meek, the ardent crocus, all
The children of the Spring kept festival;
And, more than all, the lilies! oh, how fair,
Or in her golden zone, or golden hair!

ALFRED GURNEY.

"AH, WESTERN WINDS AND WATERS
MILD."

Ah, western winds and waters mild!
Others your vaporous languors chide;
They have not loved you from a child,
Nor grown to strength your shore
beside.

Ye speak of youth and hope to me,
Ye airs, ye floods of Severn Sea!

For I was native to your mood
And apt to take your influence,
To muse and pause, to pore and brood,
To doubt the shows and shapes of
sense,
To dream how not to dream away
The long large hours of boyhood's day.

And when high noon on many a sail
Was bright along the brimming flow,
Or when the westerling sun must fail
Blood-red, and from the shifting glow
Of lilac-citron skies the queen
That sways your motion glimmered
green,

One lesson still my spirit learned
From flood and daylight fleeting past,
And from its own strange self that
yearned

Like them to lapse into the vast,
And merge and end its vague unrest
In some wide ocean of the West;

Ere we can find true peace again,
Our being must have second birth,
Purged and made one through toil and
pain

With Him Who rules and rounds the
earth,
Beyond the dark, behind the light,
In mystery of the Infinite.

And we like rivers from their source
Through cloud and shine, by deep or
shoal,

Must follow that which draws our course,
The Love that is its guide and goal;
Of life, of death ye made me free,
Waters and hills of Severn Sea!

HERBERT WARREN.

RATAPLAN.

"O Rataplan! It is a merry note,
And mother, I'm for 'listing in the
morn:"

"And would ye, son, to wear a scarlet
coat,
Go leave your mother's latter age for-
lorn?"

"O mother, I am sick of sheep and goat,
Fat cattle, and the reaping of the corn:
I long to see the British colors float:
For glory, glory, glory, was I born."
She saw him march. It was a gallant
sight.

She blest herself, and praised him for a
man.

And straight he hurried to the bitter
fight,

And found a bullet in the drear Soudan.
They dug a shallow grave—'twas all they
might:

And that's the end of glory. Rataplan!

April, 1891. EDWARD CRACROFT LEFROY.

From The Nineteenth Century.
THE NEW ASTRONOMY: A PERSONAL
RETROSPECT.

While progress in all branches of knowledge has been rapid beyond precedent during the past sixty years, in at least two directions this knowledge has been so unexpected and novel in character that two new sciences may be said to have arisen: the new medicine, with which the names of Lister and of Pasteur will remain associated; and the new astronomy, of the birth and early growth of which I have now to speak.

The new astronomy, unlike the old astronomy to which we are indebted for skill in the navigation of the seas, the calculation of the tides, and the daily regulation of time, can lay no claim to afford us material help in the routine of daily life. Her sphere lies outside the earth. Is she less fair? Shall we pay her less court because it is to mental culture in its highest form, to our purely intellectual joys that she contributes? For surely in no part of nature are the noblest and most profound conceptions of the human spirit more directly called forth than in the study of the heavens and the host thereof.

That with the glorie of so goodly sight
The hearts of men . . .
. . . may lift themselves up hyer.

May we not rather greet her in the words of Horace: "*O matre pulchra filia pulchrior*"?

As it fell to my lot to have some part in the early development of this new science, it has been suggested to me that the present Jubilee year of retrospect would be a suitable occasion to give some account of its history from the standpoint of my own work.

Before I begin the narrative of my personal observations, it is desirable that I should give a short statement of the circumstances which led up to the birth of the new science in 1859, and also say a few words of the state of scientific opinion about the matters of which it treats, just before that time.

It is not easy for men of the present generation, familiar with the knowl-

edge which the new methods of research of which I am about to speak have revealed to us, to put themselves back a generation, into the position of the scientific thought which existed on these subjects in the early years of the queen's reign. At that time any knowledge of the chemical nature and of the physics of the heavenly bodies was regarded as not only impossible of attainment by any methods of direct observation, but as, indeed, lying altogether outside the limitations imposed upon man by his senses, and by the fixity of his position upon the earth.

It could never be, it was confidently thought, more than a matter of presumption, whether even the matter of the sun, and much less that of the stars, were of the same nature as that of the earth, and the unceasing energy radiated from it due to such matter at a high temperature. The nebular hypothesis of Laplace at the end of the last century required, indeed, that matter similar to that of the earth should exist throughout the solar system; but then this hypothesis itself needed for its full confirmation the independent and direct observation that the solar matter was terrestrial in its nature. This theoretical probability in the case of the sun vanished almost into thin air when the attempt was made to extend it to the stellar hosts; for it might well be urged that in those immensely distant regions an original difference of the primordial stuff as well as other conditions of condensation were present, giving rise to groups of substances which have but little analogy with those of our earthly chemistry.

About the time of the queen's accession to the throne the French philosopher Comte put very clearly in his "*Cours de Philosophie Positive*" the views then held, of the impossibility of direct observations of the chemical nature of the heavenly bodies. He says:—

On conçoit en effet, que nous puissions conjecturer, avec quelque espoir de succès, sur la formation du système solaire dont nous faisons partie, car il nous présente de nombreux phénomènes parfaitement connus, susceptibles peut-être de

porter un témoignage décisif de sa véritable origine immédiate. Mais quelle pourrait être, au contraire, la base rationnelle de nos conjectures sur la formation des soleils eux-mêmes? Comment confirmer ou infirmer à ce sujet, d'après les phénomènes, aucune hypothèse cosmogonique, lorsqu'il n'existe vraiment en ce genre aucun phénomène exploré, ni même, sans doute, EXPLORABLE? [The capitals are mine.]

We could never know for certain, it seemed, whether the matter and the forces with which we are familiar are peculiar to the earth, or are common with it to the midnight sky,

All sow'd with glistening stars more thick
than grasse,
Whereof each other doth in brightness
passe.

For how could we extend the methods of the laboratory to bodies at distances so great that even the imagination fails to realize them?

The only communication from them which reaches us across the gulf of space is the light which tells us of their existence. Fortunately this light is not so simple in its nature as it seems to be to the unaided eye. In reality it is very complex; like a cable of many strands, it is made up of light rays of many kinds. Let this light-cable pass from air obliquely through a piece of glass, and its separate strand-rays all go astray, each turning its own way, and then go on apart. Make the glass into the shape of a wedge or prism, and the rays are twice widely scattered.

First the flaming red
Sprung vivid forth: the tawny orange
next;
And next delicious yellow; by whose side
Fell the kind beams of all-refreshing
green.
Then the pure blue, that swells autumnal
skies,
Ethereal played; and then, of sadder hue,
Emerg'd the deepened indigo, as when
The heavy-skirted evening droops with
frost;
While the last gleamings of refracted light
Died in the fainting violet away.

Within this unravelled starlight exists a strange cryptography. Some of the

rays may be blotted out, others may be enhanced in brilliancy. These differences, countless in variety, form a code of signals, in which is conveyed to us, when once we have made out the cipher in which it is written, information of the chemical nature of the celestial gases by which the different light rays have been blotted out, or by which they have been enhanced. In the hands of the astronomer a prism has now become more potent in revealing the unknown than even was said to be "Agrippa's magic glass."

It was the discovery of this code of signals, and of its interpretation, which made possible the rise of the new astronomy. We must glance, but very briefly, at some of the chief steps in the progress of events which slowly led up to this discovery.

Newton, in his classical work upon the solar spectrum, failed, through some strange fatality, to discover the narrow gaps wanting in light, which, as dark lines, cross the colors of the spectrum and constitute the code of symbols. His failure is often put down to his using a round hole in place of a narrow slit, through the overlapping of the images of which the dark lines failed to show themselves. Though Newton did use a round hole, he states distinctly in his "Optics" that later he adopted a narrow opening in the form of a long parallelogram—that is, a true slit—at first one-tenth of an inch in width, then only one-twentieth of an inch, and at last still narrower. These conditions under which Newton worked were such as should have shown him the dark lines upon his screen. Professor Johnson has recently repeated Newton's experiments under strictly similar conditions, with the result that the chief dark lines were well seen. For some reason Newton failed to discover them. A possible cause may have been the bad annealing of his prism, though he says that it was made of good glass and free from bubbles.

The dark lines were described first by Wollaston in 1792, who strangely associated them with the boundaries of the spectral colors, and so turned contem-

porary thought away from the direction in which lay their true significance. It was left to Fraunhofer in 1815, by whose name the dark lines are still known, not only to map some six hundred of them, but also to discover similar lines, but differently arranged, in several stars. Further, he found that a pair of dark lines in the solar spectrum appeared to correspond in their position in the spectrum, and in their distance from each other, to a pair of bright lines which were nearly always present in terrestrial flames. This last observation contained the key to the interpretation of the dark lines as a code of symbols; but Fraunhofer failed to use it; and the birth of astrophysics was delayed. An observation by Forbes at the eclipse of 1836 led thought away from the suggestive experiments of Fraunhofer; so that in the very year of the queen's accession the knowledge of the time had to be summed up by Mrs. Somerville in the negation: "We are still ignorant of the cause of these rayless bands."

Later on, the revelation came more or less fully to many minds. Foucault, Balfour Stewart, Angström prepared the way. Prophetic guesses were made by Stokes and by Lord Kelvin. But it was Kirchhoff who, in 1859, first fully developed the true significance of the dark lines; and by his joint work with Bunsen on the solar spectrum proved beyond all question that the dark lines in the spectrum of the sun are produced by the absorption of the vapors of the same substances, which when suitably heated give out corresponding bright lines; and, further, that many of the solar absorbing vapors are those of substances found upon the earth. The new astronomy was born.

At the time that I purchased my present house, Tulse Hill was much more than now in the country and away from the smoke of London. It was after a little hesitation that I decided to give my chief attention to observational astronomy, for I was strongly under the spell of the rapid discoveries then taking place in microscopical research in connection with physiology.

In 1856 I built a convenient observatory opening by a passage from the house, and raised so as to command an uninterrupted view of the sky except on the north side. It consisted of a dome twelve feet in diameter and a transit room. There was erected in it an equatorially mounted telescope by Dollond of five inches aperture, at that time looked upon as a large rather than a small instrument. I commenced work on the usual lines, taking transits, observing and making drawings of planets. Some of Jupiter now lying before me, I venture to think, would not compare unfavorably with drawings made with the larger instruments of the present day.

About that time Mr. Alvan Clark, the founder of the American firm famous for the construction of the great object-glasses of the Lick and the Yerkes Observatories, then a portrait-painter by profession, began, as an amateur, to make object-glasses of large size for that time, and of very great merit. Specimens of his earliest work came into the hands of my friend Mr. Dawes and received the high approval of that distinguished judge. In 1858 I purchased from Mr. Dawes an object-glass by Alvan Clark of eight inches diameter, which he parted with to make room for a lens of a larger diameter by a quarter of an inch, which Mr. Clark had undertaken to make for him. I paid the price that it had cost Mr. Dawes—namely, 200*l*. This telescope was mounted for me equatorially and provided with a clock motion by Mr. Cooke of York.

I soon became a little dissatisfied with the routine character of ordinary astronomical work, and in a vague way sought about in my mind for the possibility of research upon the heavens in a new direction or by new methods. It was just at this time, when a vague longing after newer methods of observation for attacking many of the problems of the heavenly bodies filled my mind, that the news reached me of Kirchhoff's great discovery of the true nature and the chemical constitution of the sun from his interpretation of the Fraunhofer lines.

This news was to me like the coming upon a spring of water in a dry and thirsty land. Here at last presented itself the very order of work for which in an indefinite way I was looking—namely, to extend his novel methods of research upon the sun to the other heavenly bodies. A feeling as of inspiration seized me: I felt as if I had it now in my power to lift a veil which had never before been lifted; as if a key had been put into my hands which would unlock a door which had been regarded as forever closed to man—the veil and door behind which lay the unknown mystery of the true nature of the heavenly bodies. This was especially work for which I was to a great extent prepared, from being already familiar with the chief methods of chemical and physical research.

It was just at this time that I happened to meet at a *soirée* of the Pharmaceutical Society, where spectroscopes were shown, my friend and neighbor, Dr. W. Allen Miller, professor of chemistry at King's College, who had already worked much on chemical spectroscopy. A sudden impulse seized me to suggest to him that we should return home together. On our way home I told him of what was in my mind, and asked him to join me in the attempt I was about to make, to apply Kirchhoff's methods to the stars. At first, from considerations of the great relative faintness of the stars, and the great delicacy of the work from the earth's motion, even with the aid of a clock-work, he hesitated as to the probability of our success. Finally he agreed to come to my observatory on the first fine evening, for some preliminary experiments as to what we might expect to do upon the stars.

At that time a star spectroscope was an instrument unknown to the optician. I remember that for our first trials we had one of the hollow prisms filled with bisulphide of carbon so much in use then, and which in consequence of a small leak smelt abominably. To this day this pungent odor reminds me of star spectra!

Let us look at the problem which lay

before us. It is difficult for any one, who has now only to give an order for a star spectroscope, to understand in any true degree the difficulties which we met with in attempting to make such observations for the first time. From the sun with which the Heidelberg professors had to do—which, even bright as it is, for some parts of the spectrum has no light to spare—to the brightest stars is a very far cry. The light received at the earth from a first magnitude star, as Vega, is only about the one forty thousand millionth part of that received from the sun.

Fortunately, as the stars are too far off to show a true disk, it is possible to concentrate all the light received from the star upon a large mirror or object-glass, into the telescopic image, and so increase its brightness.

We could not make use of the easy method adopted by Fraunhofer of placing a prism before the object-glass, for we needed a terrestrial spectrum, taken under the same conditions, for the interpretation, by a simultaneous comparison with it of the star's spectrum. Kirchhoff's method required that the image of a star should be thrown upon a narrow slit simultaneously with the light from a flame or from an electric spark.

These conditions made it necessary to attach a spectroscope to the eye-end of the telescope, so that it would be carried with it, with its slit in the focal plane. Then, by means of a small reflecting prism placed before one half of the slit, light from a terrestrial source at the side of the telescope could be sent into the instrument together with the star's light, and so form a spectrum by the side of the stellar spectrum, for convenient comparison with it.

This was not all. As the telescopic image of a star is a point, its spectrum will be a narrow line of light without appreciable breadth. Now for the observation of either dark or of bright lines across the spectrum a certain breadth is absolutely needful. To get breadth, the pointlike image of the star must be broadened out. As light is of first importance, it was desirable to

broaden the star's image only in the one direction necessary to give breadth to the spectrum; or, in other words, to convert the stellar point into a short line of light. Such an enlargement in one direction only could be given by the device, first employed by Fraunhofer himself, of a lens convex or concave in one direction only, and flat, and so having no action on the light, in a direction at right angles to the former one.

When I went to the distinguished optician, Mr. Andrew Ross, to ask for such a lens, he told me that no such lenses were made in England, but that the spectacle lenses then very occasionally required to correct astigmatism—first used, I believe, by the then astronomer royal, the late Sir George Airy—were ground in Berlin. He procured for me from Germany several lenses; but not long after, a cylindrical lens was ground for me by Browning. By means of such a lens, placed within the focus of the telescope, in front of the slit, the point-like image of a star could be widened in one direction so as to become a very fine line of light, just so long as, but no longer than, was necessary to give to the spectrum a breadth sufficient for distinguishing any lines by which it may be crossed.

It is scarcely possible at the present day, when all these points are as familiar as household words, for any astronomer to realize the large amount of time and labor which had to be devoted to the successful construction of the first star spectroscope. Especially was it difficult to provide for the satisfactory introduction of the light for the comparison spectrum. We soon found, to our dismay, how easily the comparison lines might become instrumentally shifted, and so be no longer strictly fiducial. As a test we used the solar lines as reflected to us from the moon—a test of more than sufficient delicacy with the resolving power at our command.

Then it was that an astronomical observatory began, for the first time, to take on the appearance of a laboratory. Primary batteries, giving forth noxious

gases, were arranged outside one of the windows; a large induction coil stood mounted on a stand on wheels so as to follow the positions of the eye-end of the telescope, together with a battery of several Leyden jars; shelves with Bunsen burners, vacuum tubes, and bottles of chemicals, especially of specimens of pure metals, lined its walls.

The observatory became a meeting place where terrestrial chemistry was brought into direct touch with celestial chemistry. The characteristic light-rays from earthly hydrogen shone side by side with the corresponding radiations from starry hydrogen, or else fell upon the dark lines due to the absorption of the hydrogen in Sirius or in Vega. Iron from our mines was line-matched, light for dark, with stellar iron from opposite parts of the celestial sphere. Sodium, which upon the earth is always present with us, was found to be widely diffused through the celestial spaces.

This time was, indeed, one of strained expectation and of scientific exaltation for the astronomer, almost without parallel; for nearly every observation revealed a new fact, and almost every night's work was red-lettered by some discovery. And yet, notwithstanding, we had to record "that the inquiry in which we had been engaged has been more than usually toilsome; indeed, it has demanded a sacrifice of time very great when compared with the amount of information which we have been able to obtain."

Soon after the close of 1862 we sent a preliminary note to the Royal Society, "On the Lines of some of the Fixed Stars," in which we gave diagrams of the spectra of Sirius, Betelgeux, and Aldebaran, and the statement that we had observed the spectra of some forty stars, and also the spectra of the planets Jupiter and Mars. It was a little remarkable that on the same day on which our paper was to be read, but some little time after it had been sent in, news arrived there from America that similar observations on some of the stars had been made by Mr. Rutherford. A very little later similar work

on the spectra of the stars was undertaken in Rome by Secchi, and in Germany by Vogel.

In February, 1863, the strictly astronomical character of the observatory was further encroached upon by the erection, in one corner, of a small photographic tent furnished with baths and other appliances for the wet collodion process. We obtained photographs, indeed, of the spectra of Sirius and Capella; but from want of steadiness and more perfect adjustment of the instruments, the spectra, though defined at the edges, did not show the dark lines as we expected. The dry collodion plates then available were not rapid enough; and the wet process was so inconvenient for long exposures, from irregular drying, and draining back from the positions in which the plates had often to be put, that we did not persevere in our attempts to photograph the stellar spectra. I resumed them with success in 1875, as we shall see further on.

At that time no convenient maps of the spectra of the chemical elements, which were then but imperfectly known, were available for comparison with the spectra of the stars. Kirchhoff's maps were confined to a few elements, and were laid down on an arbitrary scale, relatively to the solar spectrum. It was not always easy, since our work had to be done at night when the solar spectrum could not be seen, to recognize with certainty even the lines included in Kirchhoff's maps. To meet this want, I devoted a great part of 1863 to mapping, with a train of six prisms, the spectra of twenty-six of the elements; using as a standard scale the spark-spectrum of common air, which would be always at hand. The lines of air were first carefully referred to those of purified oxygen and nitrogen. The spectra were obtained by the discharge of a large induction coil furnished with a condenser of several Leyden jars. I was much assisted by specimens of pure metals furnished to me by Dr. W. A. Miller and Dr. Matthiessen. My paper on this subject, and its accompanying maps, appeared in the

volume of the Transactions of the Royal Society for 1864.

During the same time, whenever the nights were fine, our work on the spectra of the stars went on, and the results were communicated to the Royal Society in April, 1864; after which Dr. Miller had not sufficient leisure to continue working with me. The general accuracy of our work, so far as it was possible with the instruments at our disposal, is shown by the good agreement of the spectra of Aldebaran and Betelgeux with the observations of the same stars made later in Germany by Vogel.

It is obviously unsafe to claim for spectrum comparisons a greater degree of accuracy than is justified by the resolving power employed. When the apparent coincidences of the lines of the same substance are numerous, as in the case of iron; or the lines are characteristically grouped, as are those of hydrogen, of sodium, and of magnesium, there is no room for doubt that the same substances are really in the stars. Coincidence with a single line may be little better than trusting to a bruised reed; for the stellar line may, under greater resolving power, break up into two or more lines, and then the coincidence may disappear. As we shall see presently, the apparent position of the star-line may not be its true one, in consequence of the earth's or the star's motion in the line of sight. Our work, however, was amply sufficient to give a certain reply to the wonder that had so long asked in vain of what the stars were made. The chemistry of the solar system was shown to prevail, essentially at least, wherever a star twinkles. The stars were undoubtedly suns after the order of our sun, though not all at the same evolutionary stage, older or younger it may be, in the life history of bodies of which the vitality is heat. Further, elements which play a chief rôle in terrestrial physics, as iron, hydrogen, sodium, magnesium, calcium, were found to be the first and the most easily recognized of the earthly substances in the stars.

Soon after the completion of the joint

work of Dr. Miller and myself, and then working alone, I was fortunate in the early autumn of the same year, 1864, to begin some observations in a region hitherto unexplored; and which, to this day, remain associated in my memory with the profound awe which I felt on looking for the first time at that which no eye of man had seen, and which even the scientific imagination could not foreshadow.

The attempt seemed almost hopeless. For not only are the nebulae very faintly luminous—as Marius put it, “like a rush-light shining through a horn”—but their feeble shining cannot be increased in brightness, as can be that of the stars, neither to the eye nor in the spectro-scope, by any optic tube, however great.

Shortly after making the observations of which I am about to speak, I dined at Greenwich, Otto Struve being also a guest, when, on telling of my recent work on the nebulae, Sir George Airy said: “It seems to me a case of ‘Eyes and No Eyes.’” Such work indeed it was, as we shall see, on certain of the nebulae.

The nature of these mysterious bodies was still an unread riddle. Towards the end of the last century the elder Herschel, from his observations at Slough, came very near suggesting what is doubtless the true nature, and place in the Cosmos, of the nebulae. I will let him speak in his own words:—

A shining fluid of a nature unknown to us.

What a field of novelty is here opened to our conceptions! . . . We may now explain that very extensive nebulosity, expanded over more than sixty degrees of the heavens, about the constellation of Orion; a luminous matter accounting much better for it than clustering stars at a distance. . . .

If this matter is self luminous, it seems more fit to produce a star by its condensation, than to depend on the star for its existence.

This view of the nebulae as parts of a fiery mist out of which the heavens had been slowly fashioned, began a little before the middle of the present century, at least in many minds, to give

way before the revelations of the giant telescope, which had come into use, and especially of the telescope, six feet in diameter, constructed by the late Earl of Rosse at a cost of not less than 12,000*l*.

Nebula after nebula yielded, being resolved apparently into innumerable stars, as the optical power was increased; and so the opinion began to gain ground that all nebulae may be capable of resolution into stars. According to this view, nebulae would have to be regarded, not as early stages of an evolutionary progress, but rather as stellar galaxies already formed, external to our system—cosmical “sand-heaps” too remote to be separated into their component stars. Lord Rosse himself was careful to point out that it would be unsafe from his observations to conclude that all nebulosity is but the glare of stars too remote to be resolved by our instruments. In 1858 Herbert Spencer showed clearly that, notwithstanding the Parsonstown revelations, the evidence from the observation of nebulae up to that time was really in favor of their being early stages of an evolutionary progression.

On the evening of the 29th of August, 1864, I directed the telescope for the first time to a planetary nebula in Draco. The reader may now be able to picture to himself to some extent the feeling of excited suspense, mingled with a degree of awe, with which, after a few moments of hesitation, I put my eye to the spectroscope. Was I not about to look into a secret place of creation?

I looked into the spectroscope. No spectrum such as I expected! A single bright line only! At first, I suspected some displacement of the prism, and that I was looking at a reflection of the illuminated slit from one of its faces. This thought was scarcely more than momentary; then the true interpretation flashed upon me. The light of the nebula was monochromatic, and so, unlike any other light I had as yet subjected to prismatic examination, could not be extended out to form a complete spectrum. After passing through the

two prisms it remained concentrated into a single bright line, having a width corresponding to the width of the slit, and occupying in the instrument a position at that part of the spectrum to which its light belongs in refrangibility. A little closer looking showed two other bright lines on the side towards the blue, all the three lines being separated by intervals relatively dark.

The riddle of the nebulae was solved. The answer, which had come to us in the light itself, read: Not an aggregation of stars, but a luminous gas. Stars after the order of our own sun, and of the brighter stars, would give a different spectrum; the light of this nebula had clearly been emitted by a luminous gas. With an excess of caution, at the moment I did not venture to go further than to point out that we had here to do with bodies of an order quite different from that of the stars. Further observations soon convinced me that, though the short span of human life is far too minute relatively to cosmical events for us to expect to see in succession any distinct steps in so august a process, the probability is indeed overwhelming in favor of an evolution in the past, and still going on, of the heavenly hosts. A time surely existed when the matter now condensed into the sun and planets filled the whole space occupied by the solar system, in the condition of gas, which then appeared as a glowing nebula, after the order, it may be, of some now existing in the heavens. There remained no room for doubt that the nebulae, which our telescopes reveal to us, are the early stages of long processions of cosmical events, which correspond broadly to those required by the nebular hypothesis in one or other of its forms.

Not indeed that the philosophical astronomer would venture to dogmatize in matters of detail, or profess to be able to tell you pat off by heart exactly how everything has taken place in the universe, with the flippant tongue of a Lady Constance after reading "The Revelations of Chaos"—

"It shows you exactly how a star is formed; nothing could be so pretty. A

cluster of vapor—the cream of the Milky Way; a sort of celestial cheese churned into light."

It is necessary to bear distinctly in mind that the old view which made the matter of the nebulae to consist of an original fiery mist—in the words of the poet:—

. . . a tumultuous cloud
Instinct with fire and nitre—

could no longer hold its place after Helmholtz had shown, in 1854, that such an originally fiery condition of the nebulous stuff was quite unnecessary, since in the mutual gravitation of widely separated matter we have a store of potential energy sufficient to generate the high temperature of the sun and stars.

The solution of the primary riddle of the nebulae left pending some secondary questions. What chemical substances are represented by the newly found bright lines? Is solar matter common to the nebulae as well as to the stars? What are the physical conditions of the nebulous matter?

Further observations showed two lines of hydrogen; and recent observations have shown associated with it the new element recently discovered by Professor Ramsay, occluded in certain minerals, and of which a brilliant yellow line in the sun had long been looked upon as the badge of an element as yet unknown. The principal line of these nebulae suggests probably another substance which has not yet been unearthed from its hiding place in terrestrial rocks by the cunning of the chemist.

Are the nebulae very hot, or comparatively cool? The spectroscope indicates a high temperature; that is to say, that the individual molecules or atoms, which by their encounters are luminous, have motions corresponding to a very high temperature, and in this sense are very hot. On account of the great extent of the nebulae, however, a comparatively small number of luminous molecules might be sufficient to make them as bright as they appear to us; taking this view, their mean tem-

perature, if they can be said to have one, might be low, and so correspond with what we might expect to find in gaseous masses at an early stage of condensation.

In the nebulae I had as yet examined, the condensation of nearly all the light into a few bright lines made the observations of their spectra less difficult than I feared would be the case. It became, indeed, a case of "Eyes and No Eyes" when a few days later I turned the telescope to the Great Nebula in Andromeda. Its light was distributed throughout the spectrum, and consequently extremely faint. The brighter middle part only could be seen, though I have since proved, as I at first suggested might be the case, that the blue and the red ends are really not absent, but are not seen on account of their feeble effect upon the eye. Though continuous, the spectrum did not look uniform in brightness, but its extreme feebleness made it uncertain whether the irregularities were due to certain parts being enhanced by bright lines, or the other parts enfeebled by dark lines.

Out of sixty of the brighter nebulae and clusters, I found about one-third, including the planetary nebulae and that of Orion, to give the bright-line spectrum. It would be altogether out of place here to follow the results of my further observations along the same lines of research, which occupied the two years immediately succeeding.

I pass at once to a primary spectroscopic observation of one of those rare and strange sights of the heavens, of which only about nineteen have been recorded in as many centuries:—

. . . those far stars that come in sight
Once in a century.

On the 18th of May, 1866, at 5 P.M. a letter came with the address "Tuam, from an unknown correspondent, one John Birmingham." Mr. Birmingham afterwards became well known by his observations of variable stars, and especially by his valuable catalogue of Red Stars in 1877. The letter ran:—

I beg to direct your attention to a new star which I observed last Saturday night, and which must be a most interesting object for spectrum analysis. It is situated in Cor. Bor.; and is very brilliant, of about the second magnitude. I sent an account of it to the *Times* yesterday, but as that journal is not likely to publish communications from this part of the world, I scarcely think that it will find a place for mine.

Fortunately the evening was fine, and as soon as it was dusk I looked, with not a little scepticism, I freely confess, at the place of the sky named in the letter. To my great joy, there shone a bright new star, giving a new aspect to the Northern Crown; of the order doubtless of the splendid temporary star of 1572, which Tycho supposed to be generated from the ethereal substance of the Milky Way, and afterwards dissipated by the sun, or dissolved from some internal cause.

I sent a messenger for my friend Dr. Miller; and an hour later we directed the telescope, with spectroscope attached, to the blazing star. Later in the evening a letter arrived from Mr. Baxendale, who had independently discovered the star on the 15th.

By this evening, the 18th, the star had already fallen in brightness below the third magnitude. The view in the spectroscope was strange, and up to that time unprecedented. Upon a spectrum of the solar order, with its numberless dark lines, shone out brilliantly a few very bright lines. There was little doubt that at least two of these lines belonged to hydrogen. The great brilliancy of these lines as compared with the parts of the continuous spectrum upon which they fell, suggested a temperature for the gas emitting them higher than that of the star's photosphere.

Few of days, as indeed had been its forbears appearing at long intervals, the new star waned with a rapidity little less remarkable than was the suddenness of its outburst, without visible descent, all armed in a full panoply of light from the moment of its birth. A few hours only before Birmingham saw it blazing with second-magnitude

splendor, Schmidt, observing it at Athens, could testify that no outburst had taken place. Rapid was the decline of its light, falling in twelve days from the second down to the eighth magnitude.

It was obvious to us that no very considerable mass of matter could cool down from the high temperature indicated by the bright lines in so short a time. At the same time it was not less clear that the extent of the mass of the fervid gas must be on a very grand scale indeed, for a star at its undoubted distance from us, to take on so great a splendor. These considerations led us to suggest some sudden and vast convulsion, which had taken place in a star so far cooled down as to give but little light, or even to be partially crusted over; by volcanic forces, or by the disturbing approach or partial collision of another dark star. The essential character of the explanation lay in the suggestion of a possible chemical combination of some of the escaping highly heated gases from within, when cooled by the sudden expansion, which might give rise to an outburst of flame at once very brilliant and of very short duration.

The more precise statement of what occurred during our observations, as made afterwards from the pulpit of one of our cathedrals—"That from afar astronomers had seen a world on fire go out in smoke and ashes"—must be put down to an excess of the theological imagination.

From the beginning of our work upon the spectra of the stars, I saw in vision the application of the new knowledge to the creation of a great method of astronomical observation which could not fail in future to have a powerful influence on the progress of astronomy; indeed, in some respects greater than the more direct one of the investigation of the chemical nature and the relative physical conditions of the stars.

It was the opprobrium of the older astronomy—though indeed one which involved no disgrace, for à l'impossible nul n'est tenu—that only that part of the motions of the stars which is across

the line of sight could be seen and directly measured. The direct observation of the other component in the line of sight, since it caused no change of place and, from the great distance of the stars, no appreciable change of size or of brightness within an observer's lifetime, seemed to lie hopelessly quite outside the limits of man's powers. Still, it was only too clear that, so long as we were unable to ascertain directly those components of the stars' motions which lie in the line of sight, the speed and direction of the solar motion in space, and many of the great problems of the construction of the heavens, must remain more or less imperfectly known.

Now as the color of a given kind of light, and the exact position it would take up in a spectrum, depends directly upon the length of the waves, or, to put it differently, upon the number of waves which would pass into the eye in a second of time, it seemed more than probable that motion between the source of the light and the observer must change the apparent length of the waves to him, and the number reaching his eye in a second. To a swimmer striking out from the shore each wave is shorter, and the number he goes through in a given time is greater than would be the case if he had stood still in the water. Such a change of wavelength would transform any given kind of light, so that it would take a new place in the spectrum, and from the amount of this change to a higher or to a lower place, we could determine the velocity per second of the relative motion between the star and the earth.

The notion that the propagation of light is not instantaneous, though rapid far beyond the appreciation of our senses, is due, not as is sometimes stated to Francis, but to Roger Bacon, "Relinquitur ergo," he says, in his "Opus Majus," "quod lux multiplicatur in tempore . . . sed tamen non in tempore sensibil et perceptibil a visu, sed insensibil. . . ." The discovery of its actual velocity was made by Roemer in 1673, from observations of the satellites of Jupiter. Now though the

effect of motion in the line of sight upon the apparent velocity of light underlies Roemer's determinations, the idea of a change of color in light from motion between the source of light and the observer was announced for the first time by Doppler in 1841. Later, various experiments were made in connection with this view by Ballot, Sestini, Klinkerfues, Clerk Maxwell, and Fizeau. But no attempts had been made, nor were indeed possible, to discover by this principle the motions of the heavenly bodies in the line of sight. For, to learn whether any change in the light had taken place from motion in the line of sight, it was clearly necessary to know the original wave-length of the light before it left the star.

As soon as our observations had shown that certain earthly substances were present in the stars, the original wave-lengths of their lines became known, and any small want of coincidence of the stellar lines with the same lines produced upon the earth might safely be interpreted as revealing the velocity of approach or of recession between the star and the earth.

These considerations were present to my mind from the first, and helped me to bear up under many toilsome disappointments: "*Studio fallente labore.*" It was not until 1866 that I found time to construct a spectroscope of greater power for this research. It would be scarcely possible, even with greater space, to convey to the reader any true conception of the difficulties which presented themselves in this work, from various instrumental causes, and of the extreme care and caution which were needful to distinguish spurious instrumental shifts of a line from a true shift due to the star's motion.

At last, in 1868, I felt able to announce in a paper printed in the *Transactions of the Royal Society* for that year, the foundation of this new method of research, which, transcending the wildest dreams of an earlier time, enables the astronomer to measure off directly in terrestrial units the invisible motions in the line of sight of the heavenly bodies.

To pure astronomers the method came before its time, since they were then unfamiliar with Spectrum Analysis, which lay completely outside the routine work of an observatory. It would be easy to mention the names of men well known, to whom I was "as a very lovely song of one that hath a pleasant voice." They heard my words, but for a time were very slow to avail themselves of this new power of research. My observations were, however, shortly afterwards confirmed by Vogel in Germany; and by others the principle was soon applied to solar phenomena. By making use of improved methods of photography, Vogel has recently determined the motions of approach and of recession of some fifty stars, with an accuracy of about an English mile a second. In the hands of Young, Dunér, Keeler, and others, the method has been successfully applied to a determination of the rotation of the sun, of Saturn and his rings, and of Jupiter.

It has become fruitful in another direction, for it puts into our hands the power of separating double stars which are beyond the resolving power of any telescope that can ever be constructed. Pickering and Vogel have independently discovered by this method an entirely new class of double stars.

Double stars too close to be separately visible unite in giving a compound spectrum. Now, if the stars are in motion about a common centre of gravity, the lines of one star will shift periodically relatively to similar lines of the other star, in the spectrum common to both; and such lines will consequently, at those times, appear double. Even if one of the stars is too dark to give a spectrum which can be seen upon that of the other star, as is actually the case with Algol and Spica, the whirling of the stars about each other may be discovered from the periodical shifting of the lines of the brighter star relatively to terrestrial lines of the same substance. It is clear that as the stars revolve about their common centre of gravity, the bright star would be sometimes advancing, and at others re-

ceding, relatively to an observer on the earth, except it should so happen that the stars' orbit were perpendicular to the line of sight.

It would be scarcely possible, without the appearance of great exaggeration, to attempt to sketch out even in broad outline the many glorious achievements which doubtless lie before this method of research in the immediate future.

Comets in the olden time were looked upon as the portents of all kinds of woe:—

There with long bloody haire, a blazing
star
Threatens the World with Famin, Plague,
and War.

Though they were no longer, at the time of which I am speaking, a terror to mankind, they were a great mystery. Perhaps of no other phenomenon of nature had so many guesses at truth been made on different, and even on opposing principles of explanation. It was about this time that a beam of light was thrown in, for the first time, upon the night of mystery in which they moved and had their being, by the researches of Newton of Yale College, by Adams, and by Schiaparelli. The unexpected fact came out of the close relationship of the orbits of certain comets with those of periodic meteor-swarms. Only a year before the observations of which I am about to speak were made, Odling had lighted up the theatre of the Royal Institution with gas brought by a meteorite from celestial space. Two years earlier, Donati showed the light of a small comet to be in part self-emitted, and so not wholly reflected sunshine.

I had myself, in the case of three faint comets, in 1866, in 1867, and January, 1868, discovered that part of their light was peculiar to them, and that the light of the last one consisted mainly of three bright flutings. Intense, therefore, was the great expectancy with which I directed the telescope with its attached spectroscop to the much brighter comet which appeared in June, 1868.

The comet's light was resolved into

a spectrum of three bright bands or flutings, each alike falling off in brightness on the more refrangible side. On the evening of the 22nd, I measured the positions in the spectrum of the brighter beginnings of the flutings on the red side. I was not a little surprised the next morning to find that the three cometary flutings agreed in position with three similar flutings in the brightest part of the spectrum of carbon. Some time before, I had mapped down the spectrum of carbon, from different sources, chiefly from different hydrocarbons. In some of these spectra, the separate lines of which the flutings are built up are individually more distinct than in others. The comet bands, as I had seen them on the previous evening, appeared to be identical in character in this respect, as well as in position in the spectrum, with the flutings as they appeared when I took the spark in a current of olefant gas. I immediately filled a small holder with this gas, arranged an apparatus in such a manner that the gas could be attached to the end of the telescope, and its spectrum, when a spark was taken in it, seen side by side with that of the comet.

Fortunately the evening was fine; and on account of the exceptional interest of confronting for the first time the spectrum of an earthly gas with that of a comet's light, I invited Dr. Miller to come and make the crucial observation with me. The expectation which I had formed from my measures was fully confirmed. The comet's spectrum when seen together with that from the gas agreed in all respects precisely with it. The comet, though "subtle as Sphinx," had at last yielded up its secret. The principal part of its light was emitted by luminous vapor of carbon.

This result was in harmony with the nature of the gas found occluded in meteorites. Odling had found carbonic oxide as well as hydrogen in his meteorite. Wright, experimenting with another type of meteorite, found that carbon dioxide was chiefly given off. Many meteorites contain a large percentage

of hydrocarbons; from one of such sky-stones a little later I observed a spectrum similar to that of the comet. The three bands may be seen in the base of a candle flame.

Since these early observations the spectra of many comets have been examined by many observers. The close general agreement as to the three bright flutings which form the main feature of the cometary spectrum, confirms beyond doubt the view that the greater part of the light of comets is due to the fluted spectrum of carbon. Some additional knowledge of the spectra of comets, obtained by means of photography, will have its proper place later on.

About this time I devoted some attention to spectroscopic observations of the sun, and especially to the modifications of the spectrum which take place under the influence of the solar spots.

The aerial ocean around and above us, in which finely divided matter is always more or less floating, becomes itself illuminated, and a source of light, when the sun shines upon it, and so conceals, like a luminous veil, any object less brilliant than itself in the heavens beyond. From this cause the stars are invisible at midday. This curtain of light above us, at all ordinary times shuts out from our view the magnificent spectacle of red flames flashing upon a coronal glory of bright beams and streamers, which suddenly bursts upon the sight, for a few minutes only, when at rare intervals the light-curtain is lifted by the screening of the sun's light by the moon, at a total eclipse.

As yet the spectrum of the red flames had not been seen. If, as seemed probable, it should be found to be that of a gas, consisting of bright lines only, it was conceivable that the spectroscope might enable us so to weaken by dispersion the air-glare, relatively to the bright lines which would remain undispersed, that the bright lines of the flames might become visible through the atmospheric glare.

The historic sequence of events is as follows. In November, 1866, Mr. Lockyer asked the question: "May not

the spectroscope afford us evidence of the existence of the red flames, which total eclipses have revealed to us in the sun's atmosphere; though they escape all other methods of observation at other times?"

In the Report of the Council of the Royal Astronomical Society, read in February, 1868, occurs the following statement, furnished by me, in which the explanation is fully given of the principle on which I had been working to obtain the spectrum of the red flames without an eclipse:—

During the last two years Mr. Huggins has made numerous observations for the purpose of obtaining a view, if possible of the red prominences seen during an eclipse. The invisibility of these objects at ordinary times is supposed to arise from the illumination of our atmosphere. If these bodies are gaseous, their spectra would consist of bright lines. With a powerful spectroscope the light reflected from our atmosphere near the sun's limb edge would be greatly reduced in intensity by the dispersion of the prisms, while the bright lines of the prominences, if such be present, would remain but little diminished in brilliancy. This principle has been carried out by various forms of prismatic apparatus, and also by other contrivances, but hitherto without success.

At the total eclipse of the sun, August 18, 1868, several observers saw the light of the red flames to be resolved in their spectroscopes into bright lines, among which lines of hydrogen were recognized. The distinguished astronomer, Janssen, one of the observers in India, saw some of the bright lines again the next day, by means of the principle described above, when there was no eclipse.

On October 29th, Mr. Lockyer sent a note to the Royal Society to say that on that day he had succeeded in observing three bright lines, of a fine prominence.

About the time that the news of the discovery of the bright lines at the eclipse reached this country in September, I was altogether incapacitated for work for some little time through the death of my beloved mother. We had been all in all to each other for many years. The first day I was sufficiently

recovered to resume work, December 19, on looking at the sun's limb with the same spectroscope I had often used before, now that I knew exactly at what part of the spectrum to search for the lines, I saw them at the first moment of putting my eye to the instrument.

As yet, by all observers the lines only of the prominences had been seen, and therefore to learn their forms, it was necessary to combine in one design the lengths of the lines as they varied, when the slit was made to pass over a prominence. In February of the following year, it occurred to me that by widening the opening of the slit, the form of a prominence, and not its lines only, might be directly observed. This method of using a wide slit has been since universally employed.

It does not fall within the scope of this article to describe an ingenious photographic method by which Hale has been able to take daily records of the constantly varying phenomena of the red flames and the bright faculæ, upon and around the solar disk.

The purpose of this article is to sketch in very broad outline only, the principal events, in the order of their succession in time, *quorum pars magna fui*, which contributed in an important degree to the rise of the new astronomy. As a science advances it follows naturally that its further progress will consist more and more in matters of detail, and in points which are technical, rather than of general interest.

It would, therefore, be altogether out of place here, to carry on in detail the narrative of the work of my observatory, when, as was inevitable, it began to take on the character of a development only, along lines of which I have already spoken: namely, the observation of more stars, and of other nebulae, and other comets. I pass on, at once, therefore, to the year 1876, in which by the aid of the new dry plates, with gelatine films, introduced by Mr. Kennett, I was able to take up again, and this time with success, the photography of the spectra of the stars, of my early attempts at which I have already spoken.

I was now better prepared for work. My observatory had been enlarged from a dome of twelve feet in diameter, to a drum having a diameter of eighteen feet. This alteration had been made for the reception of a larger telescope made by Sir Howard Grubb, at the expense of a legacy to the Royal Society, and which was placed in my hands on loan by that society. This instrument was furnished with two telescopes: an achromatic of fifteen inches aperture, and a Cassegrain of eighteen inches aperture, with mirrors of speculum metal. At this time, one only of these telescopes could be in use at a time. Later on, in 1882, by a device which occurred to me, of giving each telescope an independent polar axis, the one working within the other, both telescopes could remain together on the equatorial mounting, and be equally ready for use.

By this time I had the great happiness of having secured an able and enthusiastic assistant, by my marriage in 1875.

The great and notable advances in astronomical methods and discoveries by means of photography since 1875, are due almost entirely to the great advantages which the gelatine dry plate possesses for use in the observatory, over the process of Daguerre, and even over that of wet collodion. The silver-bromide gelatine plate, which I was the first, I believe, to use for photographing the spectra of stars, except for its grained texture, meets the need of the astronomer at all points. This plate possesses extreme sensitiveness; it is always ready for use; it can be placed in any position; it can be exposed for hours; lastly, immediate development is not necessary, and for this reason, as I soon found to be necessary in this climate, it can be exposed again to the same object on succeeding nights; and so make up by successive instalments, as the weather may permit, the total long exposure which may be needful.

The power of the eye falls off as the spectrum extends beyond the blue, and soon falls altogether. There is therefore no drawback to the use of glass for

the prisms and lenses of a visual spectroscope. But while the sensitiveness of a photographic plate is not similarly limited, glass like the eye is imperfectly transparent, and soon becomes opaque, to the parts of the spectrum at a short distance beyond the limit of the visible spectrum. To obtain, therefore, upon the plate a spectrum complete at the blue end of stellar light, it was necessary to avoid glass, and to employ instead Iceland spar and rock crystal, which are transparent up to the limit of the ultra-violet light which can reach us through our atmosphere. Such a spectroscope was constructed and fixed with its slit at the focus of the great speculum of the Cassegrain telescope.

How was the image of a star to be easily brought, and then kept, for an hour or even for many hours, precisely at one place on a slit so narrow as about the one two-hundredth of an inch? For this purpose the very convenient device was adopted of making the slit-plates of highly polished metal, so as to form a divided mirror, in which the reflected image of a star could be observed from the eye-end of the telescope by means of a small telescope fixed within the central hole of the great mirror. A photograph of the spectrum of *a* Lyrae, taken with this instrument, was shown at the Royal Society in 1876.

In the spectra of such stars as Sirius and Vega, there came out in the ultra-violet region, which up to that time had remained unexplored, the completion of a grand rhythmical group of strong dark lines, of which the well-known hydrogen lines in the visible region form the lower members. Terrestrial chemistry became enriched with a more complete knowledge of the spectrum of hydrogen from the stars. Shortly afterwards, Cornu succeeded in photographing a similar spectrum in his laboratory from earthly hydrogen.

I presented in 1879 a paper, with maps, to the Royal Society, on the photographic spectra of the stars, which was printed in their Transactions for 1880. In this paper, besides descriptions of the photographs, and tables of the measures of the positions of

the lines, I made a first attempt to arrange the stars in a possible evolutionary series from the relative behavior of the hydrogen and the metallic lines. In this series, Sirius and Vega are placed at the hotter and earlier end; Capella and the sun, at about the same evolutionary stage, somewhere in the middle of the series; while at the most advanced and oldest stage of the stars which I had then photographed, came Betelgeux, in the spectrum of which the ultra-violet region, though not wanting is very greatly enfeebled.

Shortly afterwards, I directed the photographic arrangement of combined spectroscope and telescope to the nebula in Orion, and obtained for the first time information of the nature of its spectrum beyond the visible region. One line a little distance on in the ultra-violet region came out very strongly on the plate. If this kind of light came within the range of our vision, it would no doubt give the dominant color to the nebula, in place of its present blue-greenish hue. Other lines of the hydrogen series, as might be expected, were seen in the photograph, together with a number of other bright lines.

In 1881, for the first time since the spectroscope and also suitable photographic plates had been in the hands of astronomers, the coming of a bright comet made it possible to extend the examination of its light into the invisible region of the spectrum at the blue end. On the 22nd of June, by leaving very early a banquet at the Mansion House, I was able, after my return home, to obtain with an exposure of one hour, a good photograph of the head of the comet. It was under a great tension of expectancy that the plate was developed, so that I might be able to look for the first time into a virgin region of nature, as yet unexplored by the eye of man.

The plate contained an extension and confirmation of my earlier observations by eye. There were the combined spectra of two kinds of light—a faint continuous spectrum, crossed by Fraunhofer lines which showed it to be reflected solar light. Upon this was seen

a second spectrum of the original light emitted by the comet itself. This spectrum consisted mainly of two groups of bright lines, characteristic of the spectra of certain compounds of carbon. It will be remembered that my earlier observations revealed the three principal flutings of carbon as the main feature of a comet's spectrum in the visible region. The photograph brought a new fact to light. Liveing and Dewar had shown that one of these bands consisted of lines belonging to a nitrogen compound of carbon. We gained the new knowledge that nitrogen, as well as carbon and hydrogen, exists in comets. Now, nitrogen is present in the gas found occluded in some meteorites. At a later date, Dr. Flight showed that nitrogen formed as much as seventeen per cent. of the occluded gas from the meteorite of Cranbourne, Australia.

I have now advanced to the extreme limit of time within which the rise of the new astronomy can be regarded as taking place. At this time, in respect of the broad lines of its methods, and the wide scope of the directions in which it was already applied, it had become well established. Already it possessed a literature of its own, and many observatories were becoming, in part at least, devoted to its methods.

In my own observatory work has gone on whenever our unfavorable climate has permitted observations to be made. At the present moment more than one research is in progress. It would be altogether beyond the intention, and limited scope, of the present article to follow this later work.

We found the new astronomy newly born in a laboratory at Heidelberg; to astronomers she was

. . . a stranger,
Born out of their dominions.

We take leave of her in the full beauty of a vigorous youth, receiving homage in nearly all the observatories of the world, some of which indeed are devoted wholly to her cult. So powerful is the magic of her charms that gifts have poured in from all sides to do her

honor. It has been by such free gifts that Pickering, at Cambridge, United States, and in the southern hemisphere, has been able to give her so devoted a service. In this country, where from almost the hour of her birth she won hearts, enthusiastic worshippers have not been wanting. By the liberality of the late Mr. Newall, and the disinterested devotion of his son, a well-equipped observatory is now wholly given up to her worship at Cambridge. This Jubilee year is red-lettered at Greenwich by the inauguration of a magnificent double telescope, laid at her feet by Sir Henry Thompson. Next year, the Royal Observatory at the Cape will be able to add to its devotion to the old astronomy a homage not less sincere and enthusiastic to the new astronomy, by means of the splendid instruments which Mr. McClean, who personally serves under her colors, has presented to that observatory. In Germany, the first National Observatory dedicated to the new astronomy in 1874, under the direction of the distinguished astrophysicist, Professor Vogel, is about to be furnished by the government with new and larger instruments in her honor.

In America, many have done liberally, but Mr. Yerkes has excelled them all. This summer will be celebrated the opening of a palatial institution on the shore of Lake Geneva, founded by Mr. Yerkes, and dedicated to our fair lady, the new astronomy. This observatory, in respect of the great size of its telescope, of forty inches in aperture, the largest yet constructed, its armory of instruments for spectroscopic attack upon the heavens, and the completeness of its laboratories and its workshops, will represent the most advanced state of instrument making; and at the same time render possible, under the most favorable conditions, the latest and the most perfect methods of research of the new astronomy. Above all, the needful men will not be wanting. A knightly band, who have shown their knight-hood by prowess in discovery, led by Professor Hale in chivalrous quest of Truth, will surely make this palace of

the new astronomy worthy to be regarded as the Uraniborg of the end of the nineteenth century, as the Danish Observatory, under Tycho and his astronomers, represented the highest development of astronomy at the close of the sixteenth.

WILLIAM HUGGINS.

From The Fortnightly Review.
THE PARIS SALONS.

"It is the soul that sees; the outward eyes
Present the object, but the mind describes;
And thence delight, disgust, or cool indifference
rise."—CRABBE.

The last exhibition of the "Old Salon" that will be seen in the Palais de l'Industrie at the Champs Elysées leaves a melancholy impression on the mind. The western portion of the building is already in process of demolition, to leave the ground clear for the new Art Palace which is to be erected for the Exhibition of 1900, and which, after that tremendous and threatening exploitation has been got over, will be (as at present intended) the future home of the "Salon des Champs Elysées." The whole area of the central court is still available for the sculpture, for which it forms such an admirable field of exhibition; but the visitor on mounting to the vestibule on the upper floor, and the large gallery opening out of it, finds the usual range of galleries to the right closed, and the exhibition only runs round the eastern portion of the building, including, however, some rooms at the east end which were formerly occupied by a permanent exhibition—the "Union Centrale des Arts Decoratifs," if I remember right. The galleries for paintings are therefore somewhat curtailed in space in comparison with previous years, and the number of pictures proportionately reduced, and one might naturally have hoped that this reduction in quantity would have meant a corresponding rise in average quality. Unfortunately no such gratification awaited the visitor. The Palais de l'Industrie closes on what, as far as

painting is concerned, is the worst Salon that has been seen there for a good many years back.

Thin sown with aught of profit or delight was the line that kept running in one's mind while traversing this series of rooms full of sensational or commonplace representations of mere incident; and looking at some of the works that were hung, one could not help speculating curiously on the possible quality of those that were rejected. Or is there truth in the dark stories current among French feuilletonists as to the accessibility of the Salon Jury to private and personal influence?

The Old and New Salon at Paris stand in a relation very analogous to that of the Academy and the New Gallery in London. In each case the old institution obviously caters more for the public, the new one more for the esoterics; the old exhibition admits a great number of subject or incident pictures, the new one leans more towards the art in which treatment is of more interest than subject. Roughly speaking, in each case the two exhibitions represent two opposed views as to the objects of the art of painting, views which will, perhaps, always be more or less represented by opposition parties among artists and critics, who are too apt to regard the one view of art as necessarily exclusive of the other. This is surely a mistake. The subject picture has as much right to existence as the "art for art's sake" picture. There are, one may say, three degrees of comparison. There is the purely realistic study, in which the object is simply to paint as perfectly as possible what one sees—an end which may seem humble in an intellectual sense, but which, when carried to its highest point, is really an intellectual achievement of no mean order, as witness such a painting, for instance, as Rosa Bonheur's grand head of a lioness; there is the subject picture, in which the endeavor is to realize an incident and a character or characters which the painter has not seen; and there is finally the ideal picture, in which the

aim is purely poetic, the expression of a thought through the medium of painting, and always with the condition (for that is a *sine qua non*) that the thought shall be expressed in such a way as to subserve the conditions of beauty, of decorative effect, in painting. A picture which expresses a symbolic meaning without being beautiful as a design is only a superior kind of diagram. But it is not always or necessarily the same with an incident picture (unless where it is specially painted as a decorative work, which places it in a different category). Hence recent criticism of the "art for Art" school has taken up a hostile attitude towards incident pictures, regarding them as a form of production quite foreign to the intellectual ends of painting, and only of interest to the mob; and no doubt many incident pictures are painted which are mere common-places, and which appeal only to the ordinary sight-seeing instinct of the public, who like a picture with a story. That it is possible for an incident picture to exhibit the grandest qualities of art is, however, undeniable; we have only to cite such an example as the "Surrender of Breda." But even admitting Velasquez' great work to be an exceptional instance, even limiting our demand to that of truthful conception of the characters portrayed and competent execution of the figures and accessories, this illustrative use of painting for the realization of incident in history or fiction is both a legitimate and important object of the art of painting. As far as the spectator is concerned, it is a distinct intellectual gain if he acquires from the picture a more truthful and vivid realization of a scene or an event which he has hitherto only indistinctly pictured to his mind while reading of it; and as far as the artist is concerned, the accomplishment of such a painting presupposes, first, the power of adequately and dramatically conceiving of a character or incident; secondly, the power of realizing that conception on canvas; no inconsiderable intellectual feat. The production of a really able work of the il-

lustrative class may, in fact, demand and exhibit a higher mental power and insight than goes to furnish many a work which is dignified by the title of Ideal Art, just as Jane Austen's novels of the real life of her day evince a higher order of genius than the imaginative but often shadowy and unreal fictions of Mr. George Meredith.

It is not, therefore, because the Old Salon at Paris shows such a predominance of incident pictures that one need regard it with indifference or aversion. It is because so many of these are coarse in artistic quality and conception, a coarseness which is further emphasized and forced upon our notice by their unnecessary and defiant size. The element of barbarity which is often unpleasantly felt in modern French art is not so conspicuous this year as on some former occasions, though we are not let off entirely; a life-size tiger staked on a pointed bamboo fence, with the blood dropping from him, and a naked woman undergoing the torture of the rack before a mediæval tribunal, are among the amenities of the show. But in the more harmless subjects the attempt to be sensational is manifest at every turn. Here it is a life-size picture of a drag returning from the races, the horses foreshortened and as if stepping out of the frame—a Herring picture magnified (only the horses are not nearly so good as Herring's); there it is a "Drame d'Adultère," the husband and his friends rushing into a room to surprise the guilty couple; at another corner a life-size scene of "Le Duel Interrompu," where there is also (naturally) a lady in the case. This latter, by M. Garnelo-Alda, which has already been popularized in prints, illustrates the question of scale; it is a clever realistic picture with about the same kind of interest as the dénouement of the average French novel, and with a certain amount of dramatic spirit; but why paint such a social sketch life size? Who wants such a thing? The fact seems to be that the immense area of wall space available at the Palais de l'Industrie has exercised a pernicious

cious influence on contemporary French painting, in allowing room for the hanging of pictures which are on a much larger scale than the subject justifies—cabinet pictures magnified, in fact—and at the same time leading painters to think that unless they paint on a large scale they will be in danger of being overlooked, which is to some extent true. At the New Salon, for instance, where the walls are less crowded and the works of each painter are grouped together (an excellent practice, by the way), there are a certain number of small and very refined landscapes, such as those by M. René Billotte (some of whose works have just been exhibited in London), which can be studied with advantage there, but which one feels would be utterly swamped among the heterogeneous collection of large and staring works at the Palais de l'Industrie. There is M. Smith-Lewis, again, an American by birth, who, like most Americans who artistically Frenchify themselves, has become more French than a Frenchman, who exhibits an enormous canvas showing two cows, life size, driven into a pond by an old woman, which is really a capital cattle picture, broadly painted and full of light and air, but it would have been just as effective on a canvas one-tenth the area—"breadth" in painting is not a quality measurable by square yards or mètres; only then M. Smith-Lewis would not have got the coveted place in one of the large rooms. It would really be for the benefit of French painting if, when the new exhibition-rooms are built, the wall space were somewhat curtailed, and one large hall reserved, not for pictures wantonly painted up to its scale, but for large decorative or commemorative paintings which are *bonâ fide* commissions, and require a large space for their exhibition.

The paintings for mural decoration, commissioned by the State or by the Paris Municipality, of course form an important element in both the Salons, and we may well envy the French artists who live under a government which encourages decorative painting

and gives large commissions for it. It may be a question, however, whether the modern method of painting on the canvas separately, and having it affixed to the wall (*marouffé*) afterwards, is beneficial to the art of mural painting, though it no doubt makes matters easier for the painter. The painting is not carried out in the light in which it is ultimately to be seen, nor in immediate connection with its intended architectural surroundings; moreover, the fact that the canvas can be exhibited at the Salon before fixing it in its place is a temptation to artists to paint for effect at the Salon and not for the mural position—a temptation to which M. Benjamin-Constant and M. Bonnat, in decorative pictures exhibited in previous Salons, certainly succumbed. Decorative painting is not, however, strong this year, partly in view of the non-appearance of M. Puvis de Chavannes, the greatest decorative painter now living, who is generally the most important exhibitor at the New Salon; and the largest State commission of the year is M. Gervex's immense picture at the New Salon, of the distribution of "recompenses" in connection with the 1889 Exhibition. At the Old Salon M. Detaille has another commission picture representing Pasteur's funeral, with a portrait of M. Faure and a group of the Academicians in those green-sprigged coats which M. Daudet satirized so unkindly in "*L'Immortel*." M. Brouillet's picture of the reception of the emperor and empress of Russia at the Academy (interesting as a collection of portraits), and M. Béroud's big scene of the visit of the emperor to the tomb of Napoleon, if not State commissions, look as if they were bids for State purchase. This kind of commemoration of national events in pictures is all well enough; it is a reasonable kind of record for a government to wish to make; but such things are documents rather than works of art.

Of the decorative paintings in the proper sense, the largest is "*La Renaissance*" by M. Ehrmann, in the Old Salon, a group of portraits of Renaissance artists backed by a bevy of very

solid half-clad Muses, or whatever they are, and showing the Château of Chambord on the right. This is a commonplace piece of work, but it is fair to judge it as a cartoon for tapestry (it is to be executed at the Gobelins), in which material its rather strong and harsh coloring will seem more in place. The two best official decorative pictures in which figures are introduced are two examples of those decorations for provincial or district Mairies on which the French government, to its honor, spends money so liberally: M. Roussel's "Maternité" (Old Salon), for the Salle de Mariage at Charenton, a pretty group of mother and children, rather inspired by M. Bouguereau, and the allegorical painting, "La Vie," by M. Prouvé (New Salon), for the staircase of the Mairie of Issy-les-Moulineaux, an allegory of life expressed by figures which are realistic in design, but kept, like the landscape, sufficiently flat and conventional in treatment to remove them into the plane of decoration. This method of conveying an allegorical meaning in decorative painting, through figures which are realistic in conception though not in execution, is rather a favorite one for the decoration of Mairies and other such public buildings, and reminds one of the fact that in France the Department of "Beaux Arts" is also that of "Instruction Publique." It is evidently intended that the allegory should be "understood of the people;" this is humane if not exactly intellectual art; "emollit mores," let us hope. For the Sorbonne, on the other hand, M. Dubufe has been encouraged to convey decorative allegory through the old and time-honored medium of classically draped and undraped figures, in a work which cuts across one of the galleries at the New Salon, and which, being a ceiling, is treated in bright colors, and with the figures mostly seated on clouds. The work bears the really fine motto, "Et Scientia quoque Poesis erit," but the painting is not equal to the intellectual situation thus defined, nor is its story, if one may so call it, to be apprehended

without the help of the catalogue description; besides which it has the defect that there is a distinctly right and wrong way up to it, which should always be avoided in a ceiling painting, otherwise the spectator from below does not know which way to regard it.¹ M. Mariotton's ceiling painting in the Old Salon, "*L'Art évoquant la Beauté*," though it is a design *de sotto in sù*, with "Art" astride a fore-shortened horse flying up into the clouds (a kind of performance which is somewhat out of date), still has this merit, that it is distinctly a ceiling design, and looks out of place on a wall. A ceiling painting ought always to be so designed that it may be looked at in any direction; that is to say, if there should be ceiling paintings at all—which is perhaps a point open to discussion.

Decorative landscape painting is almost a French institution; at least, we hardly recognize such a thing in England. It means landscape treated in a flat conventional manner as to color and aerial effect, and sometimes also designed on rather rigid and formal lines. This element of conventional design may or may not be present. There are fine examples of both types this year. In the Old Salon there is M. Laurens's "*Le Lauraguais*," a landscape of rolling hills, with oxen ploughing in the foreground, perfectly free in its lines, but painted in a somewhat flat conventional manner, as if intended for fresco rather than oil. One result is that the first hill (middle distance), owing to the want of aerial perspective, does not seem to recede sufficiently, and produces the impression of what architects would call the "elevation" of a hill. Yet, in spite of this drawback, it is a grand and impressive work, one of the finest paintings of the year. The New Salon contains a fine example, M. Lerolle's "*Douce Journée*," of a landscape of decorative composi-

¹ It is odd that even so consummate a decorative artist as M. Pavis de Chavannes overlooked this in the only ceiling painting he has ever designed (exhibited in Paris three or four years ago), when he painted the figures standing on the ground just as he would have painted them on a wall.

tion; the distant hills, the lake, and the lawn foreground form a series of nearly parallel horizontal lines, crossed by the perfectly parallel vertical lines of the leafless stems of tall trees, which, however, leave a wider opening in the centre, where three figures seated on the grass make an incident in the composition. It may be fairly said that we have here the sentiment of landscape combined with a sufficiently decorative effect. And yet a healthy scepticism retains its hold on the mind. Ought there to be such a thing as "decorative landscape"?—as Falstaff says, "a question to be asked."

Of the leading pictures of the year other than those already mentioned, in the Old Salon M. Gervais perhaps takes the first place with his "*La Folie de Titania*," touching her love for him of the ass's head. Here are indeed "conscientious nudes," splendid in drawing and color, good to look at; but where does Shakespeare come in? To quote Sir John again: "And these are not fairies? I was three or four times in the thought, they were not fairies," being indeed exceedingly solid flesh-and-blood young women, with none of the glamour of the "*Midsummer Night's Dream*" about them. Still, if there is no poetry, it is first-rate painting. So also is Mme. Demont-Breton's "*A l'Eau*," a masterly painting of a young fishwife striding along towards the sea with an infant in her arms, and dragging an unwilling little naked urchin by the hand. This is a real "picture," complete in itself; a moment of human action and energy seized and faithfully recorded; one may notice, too, how admirably the lines of the whole group compose in a decorative sense, without the slightest appearance of artificial arrangement. Compared with such a work there is but a poor sentimentality about M. Bouguereau's "*Compassion*," symbolized by a group in which a man leans his head against the body of the crucified Saviour with an expression of sympathy; a picture which appeals much to the public sentiment (as it was intended to do), but it is weak and affected. M. Henri Martin, a remarkable

painter in his way, who has made both his own technique and his own line of subject, has pursued his hobby of moral processions of allegorical figures too far; or in this case it is an immoral procession, the foremost figure in the descent "*Vers l'Abîme*" being evidently intended as a personification of vice, and a rather remarkable conception as such; it is a figure that makes its mark on the memory; but as to the crowd of figures stumbling and sliding down the declivity after her, and painted as if they were made of brown paper, "that way madness lies." M. Gerôme, one of the painters who never troubles himself to paint up to Salon scale, confident, no doubt, that people will look for his works however modest in scale, has not added greatly to his reputation by his two biblical subjects, the "*Entry into Jerusalem*" and the "*Flight into Egypt*;" the former, representing the scene as without the city walls, is rather a new reading of the story, but it has not the marked individuality of M. Gerôme at his best, and one cannot help feeling that the white ass and foal were the principal object with the painter. M. Raphael Collin is disappointing; his "*Biblis*" is only a small and rather commonplace nude study. M. Henner and M. Roybet, in their very different ways, are exactly as usual. Among the battle pictures, fewer and less prominent than usual, one deserves notice for its reality, M. Sergent's "*Ordre de Charge*;" there is none of the ordinary fanfarronade about it; a line of cavalry on an eminence on the right are seen in various attitudes of impatience, trying to keep line and control their horses, while an *alide-de-camp*, on foot, struggles breathlessly uphill through the long grass with the order; it reminds one of a bit out of one of the Ereckmann-Chatrian stories.

It is more difficult to select from the works of the New Salon in a short article, as, while there are few remarkable paintings, there is a more general level of interest. M. Carolus-Duran aims at producing an effect of versatility, exhibiting some of his portraits of fashionably-clad ladies, painted with

his usual force, two still-life subjects, and three or four landscapes, and is successful in all; the landscapes are rather slight, but show real feeling for landscape effect. For the exhibition generally, one may say that it includes a good deal of good work of no special tendency, mingled with a number of groups of paintings by artists each of whom seems to be following a special aim of his own, sometimes to the verge of eccentricity. Among these latter, M. la Touche continues the same experiments in warm and glowing schemes of color expended on subjects of a semi-legendary character—the recipe is beginning to pall a little now; and M. Carrière, who is again hung opposite to him, as if his cold greys were to be a foil to M. la Touche's chromography, again paints a picture of things seen through a mist; last year it was the box tier of a theatre, this year it is the Crucifixion—nothing is sacred from a painter with a hobby; nor is there anything worth remark in M. Carrière's conception of the subject; it is a new trick of effect, that is all. Among the figure pictures of more serious interest is M. Ménard's "Automne," a rich warm landscape, with two nude figures in the foreground, rather deficient in severity of design for a decorative picture, which this professes to be; but M. Ménard has a very fine feeling for color, as he shows also in his small but grandly built landscape "Les Troupeau," with great masses of warm-tinted cloud hanging above it; a work which in sentiment and color reminds one of G. F. Watts. M. Durst, in "Au Bord de l'Etang," shows a finely painted and well drawn study of a nude figure, with broken sunlight falling on her through the branches of the trees, a picture painted in a broad full manner, and perhaps the best nude study of the year after M. Gervais's "Titania." M. Sonnier, in "L'Heure du Bain" and "Inquiète," gives us bright studies of the nude figure in full sunlight, a field of art in which M. Aublet, who might generally be regarded as *facile princeps* at the New Salon in this class of subject, is not at his best this

year, for his figures "En Plein Air" have not the quality of beauty either of line or sentiment, without which a work of this kind has little claim to attention. Among works of solid merit are M. l'Hermitte's "La Fin de la Journée," a hayfield scene with figures, painted in a broad style, in which every detail, though sufficiently indicated, is subordinated to the total effect; and two pictures of somewhat similar class, and perhaps even better, by M. Verstraëte, "Sur la Digue" and "Verger en Zélande." Among works which may be regarded as experiments in special effects, some of those of M. Picard are worth notice, especially for their powerful and original effect of color; a Russian artist, M. Botkine, has struck out a line of his own in some curious flat single-figure subjects, which look as if designed as cartoons for embroidery; and a whole room is given up to a special exhibition of the delicate and charming illustrative designs of M. Boutet de Monvel. On the whole it must be said that, though there are no works at the New Salon equal to those of M.M. Gervais and Laurens and Mme. Demont-Breton at the other exhibition, there is a considerably larger proportion of pictures which are worth serious attention.

The portrait of the year is no doubt that by M. Benjamin-Constant, at the Old Salon, representing the Duc d'Aumale seated on a bench in a park, amid an expanse of warmly lit foliage. The figure seems a little stiff in attitude; as a whole, however, the picture is a fine and, in a sense, a pathetic one; there is about it an impression of melancholy which one cannot but think intentional; it might be entitled "Fin d'une Dynastie." There are some powerful portraits of the realistic order, among which M. Bonnat's half-length of a very truculent-looking member of the French Academy is pre-eminent for force and vigor. M. Glalze contributes a hardly painted half-length of M. Saint-Saëns, which assuredly does not convey any impression of the eminent musician's genius; and M. Jules Lefebvre two superb costume portraits, as

we may call them, in which the interest lies all in the dress, and the faces are expressionless and, as flesh painting, hard and bloodless in effect. There are other more or less good portraits, but portraiture is not strong this year.

Nor is there any really great landscape, unless we accept as such M. Laurens's decorative landscape before referred to; but nevertheless landscape is the most satisfactory department of the Old Salon, as far as painting is concerned; a diligent search discovered a good many things of no ordinary merit, and which one could study with pleasure and profit. M. Harpignies only exhibits two rather small works this year, which are not very prominently hung; but one of these, "Solitude," a scene by a stream in a mellow evening light, is a noble work both in sentiment and style, built up in a grand, solid manner in which no detail is allowed to obtrude upon or weaken the general effect aimed at; there is an indefinable suggestion of an "old master" about it; and though it is nothing like so important or so grand a work as his large landscape "On the Loire" last year, I for one felt that work, though grandly composed, to be deficient in what Constable called "God's daylight," which is not the case with this smaller one. Among the more prominent landscapes at the Old Salon, the most remarkable is M. Quignon's "Pommiers en Fleurs," in which, as usual with this painter, the composition and materials are the simplest possible—merely a country lane with a line of trees, and cornfields on each side, the whole studied and worked out with the greatest care, and showing that rare quality of balance in landscape style in which realism is attained without losing breadth. One involuntarily compares this in one's mind with such an English work as Mr. Davis's "Summer" or "Elderberries" (for it has been exhibited under both titles), and while there is a delicacy of effect in the English painter's work (especially in the distance) which we do not find in the French example, the latter undoubtedly shows a grander and more masculine style. The French

seem to be succeeding especially at present in this class of landscape subjects composed of very simple materials. The next best picture after those already named is perhaps M. Guéry's "Les Coquelicots, Champagne," a wide expanse of field with a riot of poppies in the foreground, and a little stretch of rising distance to close the scene. These are pictures which are powerful enough to assert themselves anywhere; there are, however, a good many landscapes, some of the realistic, some of the more romantic cast, which are found to have very fine qualities when one can isolate them sufficiently from their violent surroundings; but the fact is that good landscapes which are quiet and unobtrusive in style are absolutely killed at the Salon; no class of good work suffers so much in this respect; and there would be much more chance of the quality of the less prominent French landscapes being fairly appreciated if they were classed together in certain galleries reserved for landscape. The New Salon, as already mentioned, contains a good many small landscapes of great interest, also some larger ones, including Mr. Davis's principal Academy picture of last year, and a fine work by M. Courtens, "Derniers Rayons." It is amusing to observe again, in the State purchases of landscape, the influence of the connection of "Instruction Publique" with Art; all the landscapes purchased are those of which the interest is mainly topographical—accurate representations of different places in the French dominions.

The general failure of the French in sea painting is perhaps not surprising, considering their national and constitutional dislike to the sea. Their sea paintings appear to be evolved out of their inner consciousness, with some astonishing results in the present salons; witness the awful affair of Madame Morin, "En Danger," where the sea looks like a wobble of blankets and treacle; or M. Dauphin's picture in the New Salon, with a large steamer on the side of a wave in a position which proves that the painter has never heard of such a thing as the "angle of stabil-

ity." Even M. Tattégtrain, a painter of the most versatile powers, fails in his "Sauvetage en Plein Mer;" his sea drives before the gale, undoubtedly, but it is in an eminently French manner. Let M. Tattégtrain force himself to take the disagreeable experience of a trip across the channel in half a gale of wind; he will suffer, no doubt, but he will gain some new experience as to the movement and appearance of the sea in rough weather, which will be permanently valuable. On the other hand, a class of work in which the French are easily ahead of us is all that which is comprised under the general term "Still Life." They devote larger canvasses to this kind of thing than it is perhaps altogether worth; but they attain perfection, as they do in their best landscapes, in the crux of realism without littleness or niggling. Such a work as M. Chrétien's "A l'Office" is a triumph of brilliant realization of the color and texture and form of a medley of articles—fruit, metal and glass dishes, and all the other details that go to make up an orthodox "still-life" picture; but it is all painted in a broad style and with a full brush, so that the execution becomes an element of interest as well as the result.

Whatever one may feel as to the shortcomings or iniquities of the pictures at the Palais de l'Industrie, the mood changes when we descend into the sculpture court. It is perhaps because sculpture is an art appealing so little to the popular mind that the French sculptors have not been under the same temptation as the painters to sink their art to the level of popular taste; at all events they have not done so. There are occasional works which partake of the sensational, which are too violent in action for sculpture, such as M. Soulés' "Bacchante à la Chèvre," and M. Charpentier's "Étoile Filante," a quasi-floating figure balanced on one hip by a support which the spectator is supposed to ignore; a subject really only fit for a relief. But on the whole, what a number of fine and dignified works are here, expressing too a number of fine and poetic ideas, for it is one

of the characteristics of French sculpture that there is not only so much good modelling but so many suggestive ideas underlying the subjects. It would be impossible here even to name all the works that are worth recognition. It may be said that there is no special new tendency discernible in the collection considered as a whole, and as representative of French sculpture of the day. What strikes one more particularly is its general high level of excellence, and the fact that it is superior to the sculpture exhibitions of several years back—perhaps superior to any since 1889, the last Exhibition year, in which year the Salon sculpture was exceptionally fine. A few special works may be referred to. One's first thought always, on coming into the sculpture court, is, "What has Falguière got here?" Happily he has returned from the error of his ways in devoting his powers to sculpturing portrait statues in "their coats, their hosen, their hats, and their other garments," and gives us a nude figure representing Poetry seated astride of a winged horse. We have seen finer heads on M. Falguière's figures than this one carries, but we are thankful at all events to have him back again in the regions of ideal art. M. Mercié exhibits a sepulchral monument to Madame Carvalho, a female figure in low relief on a stele, with the hands joined; a work in his finest and gravest style, which one may contrast with the very *genre* character of M. Verlet's monument to Maupassant for the Parc Monceau, where a modern young lady, of heroic if not colossal scale, sits with widespread skirts at the base of a stele (probably intended ultimately to carry a portrait bust) in a reflecting attitude, with a just-closed volume in her hands. If the French young lady of to-day is supposed to be specially devoted to Maupassant (which I take leave to doubt), he would certainly give her plenty to think of which she had perhaps better not think of; as for the artistic question, this is a clever and *piquant* but not very sculptural work, which would pass muster better if the figure were smaller, only life-size;

as heroic size it looks out of keeping. The prehistoric man receives attention from M. Frémiet, who shows him dragging-along a young bear by the ears after killing its mother. "Instruction Publique" regards this, too, as a work to secure, on what principle one knows not, but M. Frémiet has always been a favorite in official quarters. Some other works to be had in remembrance out of a number that are more or less good, are M. Hugues's nude figure of a potter "throwing" a vase; M. Cornu's "Spleen," in illustration of a passage from Baudelaire, a beautiful nude female figure kneeling, and as if bowed down, under a rock; M. Peyrol's "Frayer d'Enfant;" M. Puech's group for the monument to Leconte de Lisle, showing a winged female figure supporting the portrait bust placed on a stele, and with one arm encircling it; M. Icard's "Trop tard," a powerful nude group of the foolish virgins of the parable, somewhat too agitated for sculpture, but nevertheless impressive; and M. Captier's "Désespérance," a nude figure seated and leaning with grief-stricken face towards a broken anchor. All these, it will be observed, are works with a distinct poetic idea underlying them. At the New Salon sculpture takes a subordinate place, but it contains a large group by M. Dalou, sketched a good many years ago, of the "Triumph of Silenus," a work evidently conceived under the influence of Rubens, and in fact rather like a Rubens picture in the round. It is of course clever, forcible, and so on, but, for sculpture, far too violent in action. M. Bartholomé exhibits a portion of his noble work, "Monument Aux Morts" (one of the grandest achievements of modern sculpture), as executed on a large scale in stone, for its ultimate position at Père la Chaise; the recumbent figures in the tomb, with the angel watching them. M. d'Ilzsch has done a really charming and original thing, a set of nine life-sized colored busts in "cire polychrome inaltérable," symbolizing the Nine Symphonies of Beethoven. In his expression of the character of some of the symphonies in this man-

ner he has shown a great deal of æsthetic perception; the fourth, a handsome Greek face; the fifth (the C minor), a most fascinating head, half dreamy, half martial; the seventh, a noble-looking face half seen through a veil (alluding to the possible meaning of this work, which no one can agree upon); the eighth, a handsome girl with a slightly mischievous expression; the ninth, a beautiful calm head with great masses of dark hair. It is something to go into an exhibition and come across such an original and suggestive thought as this. As it was early in the day and few people about in the sculpture court, I stood before each of them in turn and sang over to her the principal themes from her symphony, to feel how far they accorded with the sculptured ideal.

The New Salon makes a feature of decorative art and craft, which are nearly ignored at the Old Salon; but the result is curious to English eyes. With the exception of some stoneware and some good pewter work in two or three of the cases in the central hall, there is nothing here which would be accepted in England as meeting the demands of decorative art. The textile designs are simply poor and commonplace; the furniture is in almost every case what we should call atrocious in taste. In these matters the French seem quite blind to the superiority and beauty of simplicity of line and of structural character; they must torture everything into odd and unexpected shapes, or they are not satisfied. Some pretty fancies there are to be seen among the silversmiths' work exhibited, but the majority of things seem to be stamped, "article de Paris." Architecture, on the other hand, is nearly unknown at the New Salon, but has a large range of wall at the Old Salon, where the superiority of French drawings of ancient work may be fully appreciated. M. Pontrémoli's series of studies and restorations of the remains at Olympia (part of the work done by him at the French Academy at the Villa Medici) form a monumental set of drawings. In illustrating modern

buildings the French architects exhibit complete plans, sections, elevations, and often constructional drawings, instead of the little perspective drawings, without even a plan, to be seen at the architectural room at the Royal Academy; but unfortunately most of the buildings are only "châteaux en Espagne"—*projets* for buildings which will never be carried out. The French method of illustrating architecture at an exhibition is far superior to ours; but the exhibition is not representative of the actual architectural work of the day, it is almost all purely academical. This might surely be amended.

The inevitable conclusion from a brief review of the two salons is that, while sculpture is in a healthy condition, the French are both painting and exhibiting too many pictures; quantity rules more than quality. I read the other day a proposal in a French paper that the exhibitions should be closed for two or three years, to give the painters time to consider what they are about and what they are really aiming at. It would really not be a bad idea, and the occasion is just opportune for it. Both Salons will be unavoidably deprived of their old galleries after this season, and there has been much controversy as to where they are to be housed till after the 1900 exhibition. Suppose they were to cut the knot by doing without exhibitions till then? It might be a very wholesome thing for French art. And when the new buildings are free for them, let us hope the wall space for future exhibitions will be somewhat more restricted, so as to afford less temptation and opportunity for commonplaces on a great scale.

H. HEATHCOTE STATHAM.

From Macmillan's Magazine.
LANDSCAPE IN POETRY.¹

"What a charming title" will be the exclamation of every one who reads

¹ *Landscape in Poetry*; by Francis T. Palgrave, late Professor of Poetry in the University of Oxford. London, 1897.

the announcement of the work before us; and the reader, we hasten at once to say, will find the book to possess all the captivating qualities which its title promises. He will find all poetic literature, from Homer to Tennyson, laid under contribution by a scholar of proved and acknowledged taste and judgment. He will have an anthology of hundreds, possibly thousands, of passages selected as illustrating the attitude of successive ages towards the external world, and full of beauty and delight, quite apart from the question whether they really illustrate that attitude or not. We hope we shall not be called ungrateful to Mr. Palgrave, or unappreciative of the boon which he has conferred on us, if we say at once that many of the passages cited seem to us to have very little bearing on the question, "How did this or that nation or epoch regard nature and the external world?" We are not, indeed, ungrateful; on the contrary, we feel that we owe him hearty thanks for a beautiful anthology. But we think that a different method should have been adopted, if his aim had been rather to show how landscape has acted on poetry than to illustrate how poets have dealt with landscape; and we hold that the former would have been, in the language of Bacon, the more light-bearing (luciferous) inquiry.

Mr. Palgrave has approached the question historically, and culled from the poets innumerable elevated, or merely pretty, passages in which poets have dealt with landscape either in describing the scene of an incident narrated, or allusively and figuratively to enhance the vigor or effectiveness of a sentiment or reflection. It seems to us that none of such passages have any bearing on the question, how nature has influenced poetry. If a poet says that the arrows fell like snowflakes, he no more shows a sympathy with nature in her wintry moods than he betrays an interest in astronomy or archery if he describes something as shaped like a half-moon or like a bow. When Homer compares Penelope's tears to the streams that flow down the mountain

side when the snow is melted, he is no more under the influence of nature than Tennyson was when he wrote:—

I would have said, "Thou canst not know,"

But my full heart, that work'd below,
Rain'd thro' my sight its overflow.

The only difference is that Homer, after the usage of his age and his own manner, goes into fuller detail, just as when he compares the jarring of a heavy and rusty bolt to the roaring of a bull, which he then goes on to describe as roaming through the flowery meads. Again, direct narration is out of court. When Virgil says of Dido, in the passage so exquisitely rendered by Tennyson, that she

Ever fail'd to draw
The quiet night into her blood,

he is far more under the influence of nature than when he paints those pretty landscapes, many of which are quoted by Mr. Palgrave; because in the one case we see that the spirit of the night has been felt by him, and that it has unconsciously influenced his diction; while in the other case we find only the conscious artist engaged in the necessary task of unfolding or embellishing his narrative.

Nothing is more invidious than to complain that a writer has not done what he never attempted to do, especially when he has done what he has attempted excellently well. Probably, indeed, Mr. Palgrave's book is really far more interesting than it would have been if he had sought to find out the true relation of the external world to different epochs and to different individuals. A pharmacopœia would be, perhaps, better reading if it passed over many healing herbs to linger rather among the lovely "flowers that the dædal earth puts forth." Yet an attempt to deal more directly with the question of the influence of landscape on poetry would have its own interest. It would be a difficult feat; but few are better equipped to essay it than Mr. Palgrave. It would have to be treated not inductively but deductively, and by

analysis rather than synthesis. It would be requisite to discard the historic method, and to devise certain categories or principles, to serve as a framework for a discussion which would tend to be vague and hard to keep within compass. Perhaps among them might stand the questions,—How far is nature *felt*, not merely described? How far is she appealed to in love and sympathy, and not merely in the interests of clearness or of ornament? How far is she analyzed with a poet's minute keenness of observation, as contrasted with the obvious reflections of an ordinary observer, however beautified by style and diction? Again, does nature sympathize with grief or mock at it? Is mental suffering more grievous amid beautiful or sordid surroundings? We fancy that the answer to most of these questions would go far to show that until quite modern times the influence of the external world on the mind of the poet was insignificant, or did not exist at all. We cannot fancy an ancient poet saying anything like Tennyson's—

On the bald street breaks the blank day;
or Burns's—

Ye banks and braes o' bonny Doon,
How can ye bloom sae fresh and fair!
How can ye chant, ye little birds,
And I sae weary, fu' o' care;

or Lord Lytton's (Owen Meredith's,—

The day comes up above the roofs
All fallow from a night of rain.

Readers of Mr. Palgrave's excellent chapter on the "Later Roman Epic" and the "Elocutio Novella" will see that at that epoch Latin poetry was making a closer approach to the modern spirit than was ever made by classical Latin poetry or by Greek or Mediæval. But, unless we are mistaken, between the ancient and the modern spirit there is a great gulf fixed. An anthologist, it is true,—Meleager, of the Syrian Gadara (about 100 B.C.)—asks the meadows why they laugh in vain,—

Λειμῶνες τί μάταια κόμαις ἐπὶ φασγὰν γελᾶτε;

but it is only for the frivolous reason that they are so much less radiant than Zenophilé. But what Greek or Latin or Hebrew poet, not to talk of Celtic and other bards whom we are surprised that the lecturer mentioned at all, could have said with Shelley:—

I love snow and all the forms
Of the radiant frost;
I love waves and winds and storms,
Everything almost
Which is Nature's, and may be
Untainted by Man's misery!

Which of them had a heart that "danced with the daffodils" or was in love with the "sweet jargonings" of "all the little birds that are"?

Considerations like these seem to have sometimes suggested themselves to Mr. Palgrave; but the analyst is overborne by the anthologist. He is so charmed by beauty in literature that he sometimes gives us passages which are merely beautiful and have, as he owns, no bearing on his subject. He notices more than once the difference in the sentiments with which the ancient and the modern worlds have regarded nature, but he does not seem to realize fully that it was a difference in kind and not merely in degree; and principles now and then appear, but only to be soon ignored when he proceeds to illustration. For instance, though we read of that "union with human feeling which, whether by way of sympathy or contrast, art itself and the human soul always imperatively call for," we look in vain for that union in his quotations from Greek, Latin, and Hebrew poetry at all events, to say nothing now of the rest. "More distinctly modern," he writes, "is the attempt to penetrate the soul of the landscape itself;" but it has not occurred to him that this attempt may be held to be wholly and solely modern, and quite uncharacteristic of the ancient or mediæval world. Is there a sign of even conscious sensibility to Nature, not to speak of an attempt to penetrate the soul of the landscape in Greek poetry before Theocritus? In Latin poetry, as Professor Sellar pointed out, there is a

good deal of conscious sensibility to nature, but something quite like the modern, the Wordsworthian and Tennysonian, attitude. Lucretius makes a shrewd and interesting remark: "How splendid would be, if seen for the first time, the clear blue color of the open sky, the wandering stars, and the moon and dazzling sun, to which now man scarce deigns to raise his sated eyes." The feeling for nature, we would say, in Latin poetry is to that of modern poetry as this passage from Lucretius is to Wordsworth's,—

There was a time when meadow, grove
and stream,
The earth, and every common sight
To me did seem
Apparel'd in celestial light,
The glory and the freshness of a dream.

But it is when we come to Horace that we are most puzzled to realize what it is that in Mr. Palgrave's opinion constitutes in a poet a real love of nature and susceptibility to her influence. Apparently the mere mention of a river, a mountain, a valley, is enough. What conceivable proof or sign of a feeling for nature can be found in the lines

Cur valle permutem Sabina
Divitias operosiores?

Yet it is with reference to this very couplet that Mr. Palgrave indignantly observes, "Those who cannot find the great poet in Horace should lay aside poetry." Now it seems to us, that for even erroneous views on this subject, renewed study under intelligent direction would be a better treatment than the complete laying aside of poetry; but we cannot regard as erroneous the view which sees in Horace a great poet absolutely uninfluenced by nature, to which, indeed, he often refers with characteristic prettiness, but only to point some shrewd comment on life, its transitoriness and so forth. Surely it does not go for nothing that by far the most elaborate of his eulogies on country life is ironical, a very clever piece of

1 Why lose my Sabine dell to gain
The cares that swell the rich man's train.

banter directed against practical men who think it graceful to go into ecstasies about the country,—indeed, the most decided protest in poetry against the main feeling which underlies what some now call the Lake School of English poetry. So far as we can gather Mr. Palgrave's meaning on page fifty-two, we are to account for Horace's limited allusions to landscape by his limited opportunities of living in the country. But is it not strange that when he does dwell, sincerely and not in mockery, on the delights of a country life, it is on the *noctes cænæque defum*, his dinner parties and country society, that he enlarges; not on the joys which the country offers, but on those which can be imported thither from the town? Yet Mr. Palgrave twice (pages 238 and 248) actually compares Horace and Wordsworth as lovers of the country.

In characterizing landscape poetry to the close of the eighteenth century, he gives us some excellent criticism which with the necessary modifications might well be applied to Horace: "Man and his works were the chief subject of Dryden's powerful Muse, and, although he looked back to Chaucer, his tales were so modernized by Dryden that the old poet became almost unrecognizable. The wonderful genius of Pope, who saw what his readers required, largely took for the object of his strenuous labor court life and the artificialities of society. Country life as such was to him intolerable dullness."

Though only too generous in his appreciation of the poets, and too ready to find, even in casual allusions, a heart attuned to the spirit of the country, Mr. Palgrave puts one poet alone outside the pale. This is that tuneful-est of singers, Ovid. The late Doctor Henry thought the first book of the "Metamorphoses" better than any part of his favorite Virgil's works. Without going so far as this, we would venture to say that the scene in which Proserpina with her girl friends plucks flowers in Enna, though depreciated as "nothing but a gardener's catalogue,"

compares favorably as landscape-painting with any of Horace's vignettes inspired by a flask of *Cæcuban* under a tree, and is not inferior to most of the illustrations cited from the subsequent poets (except Shakespeare and Milton), until we come to genuine feeling for nature in recent poetry.

Quintilian, in an oft-quoted passage, pointed out that the Latin poets admired nature only for her amenity; bold and wild scenery, mountain pass and frowning scaur, were to them *fadi* and *tetri risu* (shocking and hideous to behold). Tennyson's "Palace of Art," among its lovely pictures of peace, has its "iron coast and angry waves," its "foreground black with stones and slags," and its

Ragged rims of thunder brooding low
With shadow-streaks of rain.

All these would have been repulsive to an ancient Roman whether in art or poetry.

A very similar criticism may be made on landscape in Hebrew poetry. Biblical poetry treats landscape mainly in relation to man. The beautiful scene is the field which the Lord has blessed, which will yield a good harvest. Even the 104th Psalm is hardly landscape poetry so much as a series of reflections on the relation of nature and nature's God to living things, and especially to mankind. The one phrase in Hebrew literature which seems to show a real sympathy with nature in the modern sense is the allusion to the lilies of the field in the Sermon on the Mount, a passage which has always seemed to us as curiously unique as it is simply beautiful.

We have said that Mr. Palgrave here and there enunciates a principle which might have had a regulative influence on his quotations, but that his mind, so attuned to beauty in poetry, cannot resist the Muse when she lays herself out to please; and it has already been pointed out how the condition of "union with human feeling," or even the "sense of the Unity in Nature," is often neglected in the choice of illustrations. Though he quotes Beetho-

ven's phrase, "Mehr Ausdruck der Empfindung als Malerei (more expressive of feeling than painting)," he does not ask his poets for rendering of inner sentiment, if they will only give him sufficiently beautiful or powerful painting, as in the garden of Alcinoüs, the convulsion of nature in the "Prometheus," the praises of Athens in the "Œdipus Coloneus."

It is only when he comes to Elizabethan poetry that he makes a distinction which, as we conceive, should have guided him throughout, and lays down that the statement of a natural fact, however true, is comparatively valueless for his purpose, if too obvious. The consistent application of this principle would deprive a very large number of his quotations of their claim to a place. Much the same may be said about another excellent rule, which appears, we think for the first time on p. 171, that it is not enough merely to describe nature, she must be described for her own sake, as she is by Shelley and Wordsworth. Again, at p. 202 he clearly sees how essential for his purpose it is that with "truth to nature" should be combined "personal feeling;" but he does not seem to have missed this quality in his many exquisite citations from early Italian and Elizabethan poetry. On p. 136 he quotes from Spenser a passage in which we have "a picture of the sea and of a vast royal ship of the day which has never been surpassed in English literature." The merit of the passage is perhaps exaggerated, but what one feels most disposed to protest against is the generalization drawn from it: "With what splendid landscape scenes might Spenser have endowed us, had he thus trusted to himself more freely?" Not so; neither in its sturdy boyhood in the hands of Chaucer, nor in its graceful adolescence in those of Spenser was English poetry under the influence of nature. When she desired to describe a natural scene she described it, and sometimes very well; but she never felt nature to be a present goddess, and fortunately she never pretended that she did.

As to Celtic poetry, we must confess that to us it seems to prove nothing so clearly as the fact that sometimes the more a poet writes about nature the more he betrays how little he is under her influence. Llywarch's dry catalogues of the features of the external world interspersed with moral platitudes seem to show a temper at the opposite pole to that of the lover of nature:—

Bright are the willow-tops; playful the fish
In the lake; the wind whistles over the
tops of the branches;
Nature is superior to learning. . . .
Bright are the tops of the broom; let the
lover arrange meetings;
Very yellow are the cluster'd branches;
Shallow ford; the contented is apt to enjoy
sleep.

Yet Mr. Palgrave professes to find landscape poetry here, and indeed one might almost say everywhere. He is often obliged to qualify his eulogies, as when he says of Allan Ramsay that he deserves praise rather for his intention than for his performance, or characterizes a poem as "beautiful, but how inferior to the lyrics of Milton," or as "full of life and invention, if not highly poetical."

But it is amazing how many delightful pieces he has put before us, not perhaps bearing closely on his theme, but still very delightful for themselves. Among them we would especially note an admirable rendering by Deau Plumptre of the opening of the twenty-fourth canto of "The Inferno" (on p. 81), a passage from Ausonius (p. 65), the song of Phædria (p. 134), the river-god's song to Amoret in "The Faithful Shepherdess" (p. 140), and scores of other beautiful pieces more familiar, but all unfailing in their charm.

It is when we come to the fifteenth chapter, on Coleridge, Keats, and Shelley, that at last we find ourselves exactly at the author's point of view. And this is because now for the first time landscape begins in the fullest sense of the word to influence poetry. Here we have the personal note which personifies nature and invests her with

our human sensibilities, as when (to take one example out of a thousand in modern poetry) Shelley asks the moon,

Art thou pale for weariness
Of climbing heaven and gazing on the
earth,

Wandering companionless
Among the stars that have a different
birth—

And ever changing like a joyless eye
That finds no object worth its constancy?

In Wordsworth, of course, this is the very key-note; it is of the very fibre of his poetry, and is beautifully and copiously illustrated in the book before us.

We have also the vigorous image that presents nature to the mind as vividly as she could come before the eye in Coleridge's,—

The lightning fell with never a jag
A river steep and wide;

and in Keats's,—

These green-robed senators of mighty
woods,
Tall oaks;

and the minute observation of her moods, as when the latter paints the "swarms of minnows" in a passage closely imitated by Tennyson in "Enid and Geraint" where he compares the champions put to flight by wild Lismours to

A shoal
Of darting fish that on a summer morn
Adown the crystal dykes of Camelot
Come slipping o'er their shadows on the
sand;

But if a man who stands upon the brink
But lift a shining hand against the sun,
There is not left the twinkle of a fin
Between the cressy islets white in flower.

These and all the other signs of the influence of landscape in poetry are fairly and fully illustrated and appreciated in the delightful chapter which deals with recent poetry. The work is especially pleasing in its illustration of what is happily called Tennyson's "gift of flashing the landscape before us in a word or two," such as "little breezes dusk and shiver" and "the wrinkled sea beneath him crawls." It

is interesting to note that Æschylus (in the "Agamemnon," 1408), applies this same epithet (*πυρρὰς*) to the sea, but the editors have unanimously struck it out as an error of the copyist and replaced it by the pale and colorless *πυρρὰς* (flowing). Other excellent examples of this gift are "The blasts that blow the poplar white" in "In Memoriam;" in "The Brook"

I make the netted sunbeam dance
Against my sandy shallows;

and a less familiar passage from "The Last Tournament,"

The great waters break
Whitening for half a league, and thin
themselves
Far over sands marbled with moon and
cloud

From less and less to nothing.

In the lavish abundance of English poetry from Coleridge to Tennyson, there must of course be hundreds of admirably characteristic passages omitted in a book like this; but one cannot help wondering how Mr. Palgrave could resist Keats's

Magic casements opening on the foam
Of perilous seas in fairy lands forlorn;

or the terrible intensity of the scene in "Mariana in the South," where—

The steady glare
Shrank one sick willow sere and small;
The river bed was dusty-white,
And all the furnace of the light
Struck up against the blinding wall;

or, lastly, that amazing picture in "The Passing of Arthur," which has inspired more than one painter,—

A broken chancel with a broken cross
That stood on a dark strait of barren
land;

On one side lay the Ocean, and on one
Lay a great water, and the moon was full.

It is an interesting circumstance that from one point of view the ancient and modern world are sharply contrasted in their attitude towards nature. They both agree in drawing from the external world illustrations of mental states. Sometimes, indeed, in

ancient poetry these analogies are almost grotesque, as when Apollonius Rhodius compares the fluttering heart of Medea to a ray of light reflected from the troubled surface of a tub of water, or Virgil likens the frenzied Amata's wanderings to the gyrations of a top whipped by boys "round great empty halls." But the process is hardly ever inverted in ancient poetry. We can think of no example of such an inversion except one in the Homeric "Hymn to Hermes," where the speed with which a work was done is compared to the speed of thought:—

As when a swift thought darts into the brain
Of man, amid thick-coming doubts and fears.
And sparkling flashes dance from out his eyes.

It was possibly this remarkable passage which suggested to Tennyson a fine phrase in "The Dream of Fair Women:"—

As when a great thought strikes along the brain,
And flushes all the cheek.

The expression is very uncharacteristic of early poetry, and perhaps points (with other indications in the same poem) to a late, possibly Alexandrian origin of the hymn. And after all "quick as thought" is a conception so familiar and natural that its elaboration into a metaphor hardly makes a real exception to an established rule. But in modern poetry it is quite common. Shelley compares a rock clinging to the side of a ravine to "a wretched soul" which

Hour after hour
Clings to the mass of life; yet clinging
leans,
And leaning makes more dark the dread
abyss
In which it fears to fall.

To Browning the black-thorn boughs, dark in the wood but white in the sunshine with coming buds, are "like the bright side of a sorrow." And in "The Princess" there is a very striking figure:—

Let the wild
Lean-headed eagles yelp aloud, and leave
The monstrous ledges there to slope, and
spill
Their thousand wreaths of dangling
water-smoke,
That like a broken purpose waste in air.

Every one remembers Homer's comparison of man to the leaves of the forest; but we had to wait till the era of Shelley for the converse simile in which the dead autumn leaves are likened to

Ghosts from an enchanter fleeing,
Yellow and black and pale and hectic
red,
Pestilence-stricken multitudes.

It will be seen that in Mr. Palgrave's work we have ventured to take exception only to the method, or rather to suggest that the adoption of a different method might have given more scope to his faculties as a critic, though it might not have produced a more attractive book. The execution is generally excellent. The translations from Greek and Latin poetry show scholarship and taste. Sometimes the printers have gone astray, and the necessary correction has been lacking. For instance, on p. 26 *husky* must be a misprint for *dusky* which would be a very fair rendering of αἰθαλίωτες; on page 29 περιπλανῶν should be περιπλεῶν in the translation from Menander on p. 32 we should read "shouldst thou live" and "thou wilt see;" *birds* has usurped the place of *buds* in the rendering from the Georgics on p. 46. But the most unfortunate misprint is that of *whom* for *who* in a sentence on p. 118: "Dorigen goes on to speak of the hundred thousand whom she fancies have been dashed against the rocks and slain." This is an unfortunate misprint, for it seems to give the great sanction of the editor of "The Golden Treasury" and of a professor of poetry at Oxford, to a vile solecism which is gradually making its way into conversation and into the provincial daily press. In a writer who is usually so tenacious of a pure English diction we do not like to read that "the part

omitted is of some length" when the meaning is that it is of *considerable length*. Such expressions pave the way for the Americanism "he has been away quite a time." Finally, "to what simplicity of nature does he not return?" (p. 160) gives countenance to a growing misuse of the negative in interjectional sentences. The words quoted should mean "he returns to every simplicity of nature," but the sentiment intended to be conveyed is obviously "how he returns to the simplicity of nature." "What pleas did I not urge" is right enough for "I urged every plea." But "what tears did I not shed" is wrong, for the meaning could only be "I shed every tear," which would be a very singular expression, nearly as strange as "what a wet day was it not," for "how wet it was." The neglect of this obvious distinction is becoming very prevalent; otherwise it would not have been worth while to dwell on so minute a topic. But, indeed, the general character of Mr. Palgrave's work is so high that one would naturally like to have it without a flaw; and his position is such that his authority might well be quoted for usages which he would be the first to disown. We should all offer him our hearty thanks and congratulations on a piece of work which few could have attempted, few indeed could have accomplished so well; and we can only regret that criticism must so often emphasize rather points of divergence than of concurrence, and devote to cold appraisal pages which might have been filled with warm praise.

R. Y. TYRRELL.

From The Contemporary Review.
THE GERMANS AND THEIR KAISER.

Of all her Majesty's grandchildren none regret more keenly than Wilhelm II., *Imperator et Rer*, that he has not been invited to England for the Queen's Jubilee. In London, among the six million of Englishmen, the German emperor would have taken delight in pos-

ing as the great Cæsar, the modern embodiment of the divine right, the representative of the Almighty, and the universal providence of all mankind.

Ten years ago, at the 1887 jubilee, hardly anybody paid the slightest attention to the then Prinz Wilhelm von Preussen. The old emperor, Wilhelm I., was still alive, the crown prince, the husband of our princess royal, in the prime of manhood, and "Willie," a nobody amongst the host of princes from all parts of the world. And emperor as well as king though he is to-day, still stronger there lives in him the *cabotin*, the man who continually wants to advertise himself, who daily and even hourly desires to put himself *en evidence*, and whose strongest craving is to make the world talk of him and occupy itself with him and his doings.

Had the German emperor been invited to come to London, heaven only knows what he might have done to attract people's attention. Perhaps he would have adorned the pages of the Visitor's Book at the Guildhall with his favorite maxim, *Regis voluntas suprema lex*—the words which he wrote above his signature in the Golden Book at Munich. Or he might have asked the queen to allow him to put himself at the head of the whole population of England to march past her majesty; for a "march past" is the emperor's ideal of bliss. Not without good reason, do his witty Berlin subjects say with bated breath, that their emperor is suffering from *deflirium tremens*.

But perhaps it is just as well that the emperor should not leave Germany at the present moment. The public mind through the length and breadth of the Fatherland appears to be uneasy. The foreign observer must find it somewhat difficult to understand, why there should be so much excitement at present in Germany. But to the close student the reasons cannot be secret.

The emperor leads a double life, a kind of Jekyll and Hyde existence. In theory he acknowledges that the present age represents progress and forward movement, but in practice he recognizes no other will but his own, in

every sphere, in every department of public and, as far as possible, of private life. *Regis voluntas suprema lex.* The king's will, and nothing else, is the law of the land; this maxim forms the guiding principle of all his actions. Omniscience he claims as one of the attributes of his kingly majesty; popular wit expresses this in the words, "God knows everything, but the emperor William knows everything better."

A jury of experts decides which drama ought to receive the Schiller prize for the finest play; the emperor annuls their decision, for his judgment is more competent than theirs. The pope claims infallibility only in matters of faith or religion; but the German emperor claims that he is infallible in everything and anything, and not only in his judgment about the works of others, but also in his own acts and doings, in his private as well as in his public capacity. What he, the emperor, does not know is not worth knowing, and when one of his sisters, the present Duchess of Sparta, ventured to express the opinion that English men-of-war looked finer than the German ironclads, his Omniscience, in quite a loud voice, and before some ladies of the court, called her a stupid goose for her pains.

Things must have come to a pretty pass in Germany when the *Cologne Gazette*, one of the most loyal and patriotic of German newspapers, writes that the emperor is surrounded exclusively by men who belong to the Junker class, and that the statesmen on whom falls the responsibility are not in personal touch with his Majesty, and, like the ministers of the sultan, have to combat the permanent influence of his entourage. There is the rub. The *Rhenish Gazette* has touched the real sore point. It is supposed that Germany possesses an Imperial constitution, that Prussia also has such a document, that there is an Imperial Diet, and that a Prussian Chamber is also at work. True, quite true. But only in theory do all these fine institutions exist, just as the law about duel-

ling is upon the pages of the statute-book, or the paragraph in the constitution, that "all Prussians possess the same political rights." The will of the emperor is the real law of the land. He commands, and a duel must take place, whatever the law may say; he declares that the *Adeligen* are the better, the higher men in the Fatherland, whatever musty paragraphs may declare to the contrary. The nobleman alone is of full weight; all the other citizens must consider themselves under a kind of *capitis diminutio*, as only second-best. The lowest *Herr von* is by birth, or becomes by being ennobled, a far superior being to the most illustrious commoner; the younger sub-lieutenant, by wearing the king's uniform—the *Koenigsrock*—and therefore participating in, or representing, the king's majesty, rises immediately above all merely civilian citizens, be they the best and worthiest of the land. Not once, but many times, on various occasions and in numberless public speeches, has the emperor expressed these views. What can the constitution, the charter, mean to such a monarch?

The *National Zeitung* of Berlin, a very mildly liberal *bourgeois* paper, is compelled to say that it is clear enough that the rights of Prussians are to be reduced to what they were at the end of the last century, when civil liberty, in a constitutional sense, simply did not exist.

The hatred of the present German emperor against the very slightest approach to freedom and liberty shows itself in his unfeeling contempt for his father, the good Emperor Frederic. It is a well-known fact that during the too short reign of that unfortunate martyr, expressions were used by the immediate friends of the then crown prince with reference to the Emperor Frederic, which, if uttered to-day concerning the present monarch, would be most severely punished, as *lèse-majesté*, with long terms of imprisonment. And in all the hundreds of his speeches, addresses, and toasts, William II. has hardly ever, if at all, men-

tioned the name of his father. For Frederic II. was supposed to lean towards "Liberalism," and to admire the institutions of England, the home of his wife.

The present emperor's ideal of a prince is his grandfather Wilhelm I., whom his grandson has officially "advanced" to the title of "the Great." Woe betide the poor German subject who should dare to criticise his emperor's command concerning that title. Lèse-majesté and years in prison can alone atone for such a crime. Political spies, like the delatores of corrupt imperial Rome, prowl about in all parts of the Fatherland, and denounce the unwary citizen. Sycophantic Byzantine public prosecutors indict him with the greatest zeal and official fury for some lèse-majesté, which was very often nothing but the hasty expression of an ill-bred person, or the remark of a sharp tongue. These pushing young king's attorneys demean themselves by taking up cases in which, perhaps years ago, a man in the presence of his own family made an unguarded remark about the emperor; it is now denounced to the police by a servant or a bad relation from spite or other infamous motive. Well these *Staatsanwälte* know that by such zeal they ingratiate themselves in the highest quarters. They are sure to "arrive," as the French put it. Their lord and master has a good memory for such magistrates. And the poor wretches, who in a moment of excitement, or, perhaps in a drunken fit, have used bad language concerning the emperor—for in nine cases out of ten it comes to nothing more—are sure to be punished severely, without the slightest hope of pardon. Whereas the nobleman, the officer, who killed a private citizen is let off after a short imprisonment.

Thus the middle classes see, with sullen discontent, that the administration of justice, formerly the brightest spot in Prussian public life, is tarnished as soon as the slightest question arises between the feudal nobility and the members of the citizen-class. Equality of

the Prussian before the law no longer exists. A feudal baron, though a convict and sentenced to penal servitude for the most degrading crime, is addressed by the president of a court of justice, before whom the prisoner has to appear as a witness, in the most obsequious manner as Herr Baron. An editor of a newspaper, on the contrary, who is sent to prison for some imaginary insult offered to a railway guard or other civil service employé, is treated before the court of justice with the grossest rudeness. The magistrates who behave in this manner are wise men. They know the time of day.

But there is another class of men in Germany who also know, and who bide their time. The Social Democrats, twenty-five years ago a mere handful, without leaders and without discipline, are now the thorn in the flesh of the emperor. At first he tried, or rather it looked as if he tried, to propitiate them; he gave out that the aspirations and aims of the Socialists had no better friend, no greater protector than the emperor. But that was at the time when Bismarck was to be got rid of, and when William II. wanted to pose as the *arbitrer freund*, while the old chancellor was to be considered as their implacable enemy. The Socialists took what they could get; but they never were misled as to what were the real motives of this behavior towards them. When the emperor saw that he was found out, he abandoned the sugar method and took to the whip again. And from that moment commenced the struggle, which is not a party fight in the English sense of the word, but the battle between despotism and liberty, between the theory of the divine right king, and the self-government of the people through Parliament. In the eyes of the emperor the Socialists are the enemies of his kingdom and his crown; they are *Vaterlandslose Gesellen* (a cosmopolitan crew), who are impudent enough to oppose his will, his imperial commands. As a red rag provokes a bull, the "impudence" of the Social Demo-

crats provokes the furious wrath of the emperor. He will exterminate them, he will sweep them from the earth; his soldiers shall shoot them whenever the occasion arrives. And the Social Democrats regard the emperor in the same light in which James II. was looked upon by English patriots, as a man who cannot be trusted; as a monarch who loathes the constitution of his country. Add to these general reasons, on public grounds, the hatred of the Socialists against the emperor, as man against man on account of all the *tracasseries*, the petty persecution, and the innumerable wrongs done to them, as they believe, by his special order and command.

The situation is getting more and more dangerous, the feeling of discontent increases in intensity every day; even very moderate and loyal men are beginning to see in the new legislation against political associations many striking utterances, which enable them to infer how powerfully in the highest circles the idea is gaining ground, that one day it will be necessary to crush a Social Democratic rising of the whole people by force of arms. When that day comes it will be an evil day for Germany and for the emperor. The Germans have not yet had their 1688, nor their 1789; and we cannot believe that they will be spared the experience of England and of France. The literary Golden Age in Germany also arrived a century later than the similar epochs in the two Western European countries. Notwithstanding Sadowa and Sedan, notwithstanding their superior chemical industry and their Röntgen rays, the Germans, as a political body, are a hundred years behind the English or the French nation. They boast of a constitution, a parliament, and all the other paraphernalia of modern government. But the emperor nevertheless considers himself the master, just as James II. did.

This discontent is not limited to the Social Democrats; the middle classes also grumble, and complain that the emperor fosters and favors the pretensions of the feudal nobility, that even

the administration of justice is tainted, wherever there is a conflict between feudal pretensions and the rights of the citizen. Thousands are thus driven into the ranks of the Social Democratic party; every election shows this more clearly, and the emperor thinks that *reactionary* laws, repression and violence will stem the tide, which they can no more do than Mrs. Partington's broom. One would think that the military class at least would unreservedly admire the emperor. But even this does not happen to be the case. The highest military circles are continually in a state of trepidation, lest the emperor in one of his unaccountable fits of energy should plunge the country into war, and then insist on taking command of the army, being his own general-in-chief, chief of staff and commander of everything under heaven. A catastrophe would then be unavoidable, say the most experienced generals. There is no science, no art, no profession, in which the emperor does not consider himself a master. But even more. He will lay down the law, he will rush in with conceited step where the wisest men would not dare to tread. To his insane craving for self advertising *urbi et orbi* nothing is too small, nothing too remote. A boat-race which does not concern him in the least yields just as good grist to his mill, furnishes as good an opportunity for a telegram signed "Wilhelm I. & R.," as Jameson's raid into the Transvaal. So far, the emperor's conceit has only pleased him without doing much hurt to other people—though once he came very near overdoing the thing. But far more dangerous than his mere vanity are his belief that he is almighty, his inability to brook contradiction, his contempt for the parliamentary institutions of his own country as well as of other lands.

A violent conflict between this autocratic, headstrong monarch and the people seems unavoidable. The Social Democratic party is gradually approaching the point when it will be eager to measure swords with the "di-

vine right" king, and to fight for the people's rights against the monarch by the grace of God. The army, as a machine for the purpose of mowing down "rebellious subjects" is expected to do its duty, should the occasion arrive and the order be given to shoot. But suppose the soldiers, the sons and brothers of Social Democrats, should hesitate to obey? Preparations are already made by express order of the emperor to amend the laws against associations, and the situation must have become very critical when a Berlin journal comments thus on the proposed new bill: "The emperor demanded the incorporation in the bill of provisions for the protection of the public safety and the public peace, because he is entirely governed by the idea that security and peace are menaced, and that the possibility of a rising on the part of the *Vaterlandslose Gesellen* (unpatriotic fellows) must be taken into account." The emperor, the captain and pilot of the ship of State, sees that there are rocks ahead, and his proposed way of getting out of danger consists in screwing down the safety valve. Whether by this method the port can be reached is somewhat doubtful. Prudent people in Germany, men who have rendered service to their country, look with grave anxiety upon the present state of affairs. They know that the headstrong monarch who at this moment guides the destinies of the Fatherland constitutes a danger to their country, that what he considers to be energy is generally only fussiness, that he possesses neither wisdom nor patience, and that his efforts to put back the clock of Germany to the time of the dark ages can but end in ruin for the crown and for the country.

GERMANICUS.

From Cosmopolis.
GIUSEPPE MAZZINI.

I well remember some great and good men whom it has been my privilege and my good fortune to know, but none do I

see so plainly before me as Giuseppe Mazzini. His features, his expression, and his every gesture, all are indelibly engraven on my memory. Is it because thirty-four years ago I painted a portrait of him that hangs here just opposite me, and I reverently look up at it as I am about to speak of him? Or is it not rather that, to have known Mazzini, means ever to remember him—to hear his voice, to feel his influence, and to recall his outward form?

The portrait was painted in the little studio of my bachelor days, which measured about twenty feet by ten, and had no other appendage but a good-sized cupboard, by courtesy called a bedroom. But it was situated right in the middle of six or eight acres of ground in the heart of London, which for many years went by the name of "Cadogan Gardens," till one day it was "improved" away, and its good name was transferred to a new row of Philistine stone houses. Such as it was in 1862, Mazzini liked it, and would often look in on me and my brother-in-law, Antonin Roche, the only other occupant of those square gardens.

Roche, who is now of a ripe old age, and is enjoying a well-earned rest, was an old friend of Mazzini. The two took very opposite views in politics, for Roche was a "Légitimiste," warmly attached to the direct line of the Bourbons, and true to their white flag; whilst in the eyes of Mazzini, as we know, all kings were pretty equally black, and no flag acceptable but the white, green, and red one of a united Italy. A long experience had taught him to place no faith in princes, but to centre his hopes in the people, and in the ultimate triumph of Republican institutions. So he and Roche had right royal word-fights when they met, and they were not badly matched; for Roche was quite a living encyclopædia of knowledge, and had the history of mankind, from the days of Adam up to date, at his fingers' ends. And he had every opportunity of keeping his knowledge fresh, for during a period of forty-five years he regularly held his French "Cours" on history, literature, and a

variety of other subjects; and before he retired he had educated three generations of England's fairest and most aristocratic daughters.

Mazzini and he, then, would often discuss politics and political economy of the past, present, and future, and I sometimes ventured to join in their conversation. To-day I see the presumption of my ways, but then I was younger, and whilst reverencing the master-mind, and feeling infinitesimally small next to the great man, I yet was bold enough to advance where many besides angels would have feared to tread. I had lived in France for some years under the Second Empire, and had, perhaps, more respect for the successful than I have now. I had witnessed the rebuilding of Paris, the revival of art, and many evidences of increasing prosperity, and—always allowing for the needs of France and the French of that day—I looked upon Louis Napoleon as rather the right man in the right place.

But Mazzini reviled him, and at the mention of his name would burst forth into a passionate philippic, crushing "the adventurer, the perjurer, the tyrant" with all the weight of his glowing indignation. "But apart from all that," he would say, "we hate each other personally."

He was certainly the most uncompromising enemy of royalty, disdaining threats and blandishments alike, and preferring exile to the acceptance of such favors as the amnesty that at a later period recalled him and his friends to their native land. "He who can debase himself," he said, "by accepting the royal clemency will some day stand in need of the people's clemency."

If he was grand in his wrath he was grand also in his ideal aspirations. Whether he thundered with the withering eloquence of a Cicero, or pleaded for the Brotherhood of Man with the accents of love; whether he bowed his head humbly before the power of one great God, or rose fanatically to preach the new Gospel, "*Dio è il popolo*," the conviction that spoke from that man's lips was so intense, that it kindled con-

viction; his soul so stirred, that one's soul could not but vibrate responsively. To be sure, at the time I am speaking of, every conversation seemed to lead up to the one all-absorbing topic, the unification of Italy. She must be freed from the yoke of the Austrian or the Frenchman; the dungeons of King Bomba must be opened and the fetters forged at the Vatican shaken off. His eyes sparkled as he spoke, and reflected the ever-glowing and illuminating fire within; he held you magnetically. He would penetrate into some innermost recess of your conscience and kindle a spark where all had been darkness. Whilst under the influence of that eye, that voice, you felt as if you could leave father and mother and follow him, the Elect of Providence, who had come to overthrow the whole wretched fabric of falsehoods holding mankind in bondage. He gave you eyes to see, and ears to hear, and you too were stirred to rise and go forth to propagate the new Gospel: "*The Duties of Man*."

There was another side of his nature that many a time deeply impressed me. The enthusiast, the conspirator, would give way to the poet, the dreamer, as he would speak of God's nature and of its loveliest creation, woman; of innocent childhood, of sunshine and flowers.

I have heard much said about woman and Woman's Rights since the days of Mazzini, from pulpit and platform, from easy-chair and office-stool. It often seemed to me to be said in beautiful prose; but still in prose. Mazzini spoke the language of poetry; not in hexameters or blank verse, but still, it was poetry. We of to-day look forward, create a new ideal, a new woman; he looked backward to the days of his childhood, and conjured up a vision of Maria Mazzini, his mother.

He loved children, too, and they him. There were boys and girls of all ages in the Roche family, clever and active, and, consequently, what wise and sapient parents call naughty. Some of these now ex-children tell me they have a distinct recollection of having been on more than one occasion turned out and sent to bed prematurely. "We often

got into trouble," they say, "when Louis Blanc was there, but we were always good for Mazzini; that was because he was so kind, and never failed to inquire after the dolls; and then we loved to sit and listen to him. To be sure we sometimes didn't understand a word of the conversation going on, but his voice was so beautiful that it fascinated us."

Overawed I think would frequently have been more correct, when I remember how they must have heard him denouncing the Austrian rule, or holding up to execration his crowned enemies. I always looked upon him, as I certainly believe he did upon himself, as the ordained champion of the oppressed, and as a menacing tool in the hands of an unflinching Providence. He himself was as unflinching as the Fates, and, regarding himself as the embodiment of a good cause, cared little for the obloquy his opponents ever heaped upon his head. To name but one instance: when Orsini attempted the life of Napoleon III., throwing a bomb at the imperial carriage as it was approaching the Opera House in the Rue Drouot, not killing the object of his hatred, but making so many innocent victims, a cry of horror went through the civilized world, and Mazzini got his full share of execration. Nobody entertained a doubt that he was at the bottom of the plot. It could only be he who had organized it; he had supplied the bombs, and Orsini was but a tool sent to the post of danger, whilst he himself remained on the safe side of the water that separated hospitable England from the realm of the French emperor and his ever watchful police.

The world was mistaken. Mazzini may have hatched plots and prepared coups, indeed to do so was his daily task; and sometimes when I asked him: "Eh bien, comment cela va? Qu'est-ce que vous faites?" he would pleasantly answer: "Je conspire;" but in this case we knew that he could not have had any communication with Orsini. What had happened between them had led to an irreparable breach. During one of Mazzini's secret visits to the continent,

his friend, Sir James Stansfeld, then Mr. Stansfeld, had undertaken to open his letters for him, and to forward what he deemed desirable. Among others a letter from Orsini thus came into his hands which contained the vilest accusations against two most deservedly respected ladies, friends both of Mr. Stansfeld and of Mazzini. The indignant answer with which the former met the slander led in true continental fashion to a challenge from Orsini, which, it is needless to say, was treated with contempt. Mazzini, to whom woman was ever an ideal to be looked up to and revered, was deeply incensed. He never met Orsini after the incident, and he never forgave him the libels he had penned.

Alluding to these circumstances, I asked him why he did not publicly contradict the reports that accused him of complicity; knowing, as I did, that they were untrue, I wondered that he did not repudiate the charge. To that he answered: "It matters nothing, or rather it is well the world should believe me implicated. I never protest. Europe needs a bugbear, a watchword that threatens, a name that makes itself feared. The few syllables that go to make up my name will serve the purpose as well as any other."

Mr. Stansfeld was one of his earliest friends. He has often told me how great was the personal influence Mazzini exercised over him. "What could be loftier," he writes, "than his conception of duty as the standard of life for nations and individuals alike, and of right as a consequence of duty fulfilled? His earnestness and eloquence fascinated me from the first, and many young men of that time have had their after-lives elevated by his living example."

There were two associations of which all the most active members were young men, Mr. Stansfeld amongst the number: "The People's International League," and "The Society of the Friends of Italy," the latter especially exercising considerable influence in accentuating and bringing to the front the disposition of British public opinion

in favor of the emancipation and unification of Italy. At the close of the revolution that in 1848 shook the very foundations on which rested European thrones, many of the most prominent leaders and revolutionary personalities of the period sought shelter in the sanctuary of the British Islands, and it was at this time that Mazzini's more intimate friends found a hospitable and cordial reception at Mr. Stansfeld's house. Mazzini himself had first come to London when he was obliged to leave Switzerland in 1841. One or two of the incidents that arose out of his presence in England are worth recalling.

In 1844 a petition from Mazzini and others was presented in the House of Commons, complaining that their letters had been opened in the Post Office. Sir James Graham, under whose instructions as secretary of state this had been done, defended his action, and roundly abused Mazzini, as did Lord Aberdeen in the House of Lords. They, however, afterwards apologized for their calumnies. A bill was introduced to put a stop to the power of opening letters by the secretary of state, but was dropped. It was on this occasion that Carlyle wrote to the *Times* his famous defence of Mazzini. "I have had the honor to know Mr. Mazzini for a series of years," he says, "and, whatever I may think of his practical insight and skill in worldly affairs, I can with great freedom testify to all men that he, if ever I have seen one such, is a man of genius and virtue, a man of sterling veracity, humanity, and nobleness of mind, one of those rare men, numerable unfortunately but as units in this world, who are worthy to be called martyr souls."

Twenty years later the subject of Mazzini's letters once more led to heated controversy in the House of Commons. At that time Mr. Stansfeld was a Junior Lord of the Admiralty. His friendship for the champion of Italy's rights had ripened as years went on, and he was ever ready to serve him and the good cause. It happened that the French Procureur-Impérial, while engaged in prosecuting a State con-

spiracy, discovered that one of the accused persons had been found in possession of a letter telling him to write for money to Mr. Flowers at 35 Thurlow-square, S. W. This was Mr. Stansfeld's address, and he did not hesitate to admit that he had allowed Mazzini to have his letters addressed there, under the title of M. Fiori (Anglicè Flowers), to prevent those letters from being opened, while at the same time he knew nothing of their contents. The incident was used by Disraeli to make an attack on the Palmerston government for containing in its ranks so dangerous a man as Stansfeld—a man actually engaged in sheltering a conspirator and "the great promoter of assassination," as he was pleased to call Mazzini. Bright made a strong speech defending Stansfeld and Mazzini, and declaring that Disraeli himself had justified regicide, as he had in the "Revolutionary Epic." Stansfeld also spoke, saying that he was proud of the intimate friendship of Mazzini, and denying that the great patriot could be properly described in the scurrilous language Disraeli had used.

It was in consequence of this incident that Mr. Stansfeld resigned office, "perfectly satisfied," he says in a letter on the subject, "in being able by so doing to reconcile the duties of private friendship with my obligations to the government of which I was the youngest member." Since then thirty-three years have elapsed, and, whether as Mr., or Sir James, Stansfeld has always been a good knight and true, laboring with the zeal of the reformer and the foresight of the statesman. In Mazzini he admired not only the patriot who served his own country with passionate devotion, but the teacher who, seeing far beyond the narrow limits of each separate nation, could realize the ideal of international unity, and foreshadow a future in which the aim of statesmanship among free nations would no longer be to perpetuate the weakness of others, but "to secure the amelioration of all, and the progress of each for the benefit of all the others."

Thus impressed with the solidarity of

nations, and the community of their interests, Stansfeld has at all times advocated the cause of international unity and the establishment of tribunals of arbitration; and to this day, if a powerful figure-head is wanted to represent those causes, be it to preside over a meeting or to introduce a deputation to the prime minister, we look to Sir James as the man round whom the best and most influential politicians will rally, and whom they will cordially support, confident as they are both of his strength and of his discretion.

From the arena of politics, national and international, to the four walls of my little studio, is an abrupt transition; but with the name of Mazzini as a connecting link, it needs no apology. So I make straight for Cadogan-gardens, in order to mention a pleasant recollection I have of a certain October evening in 1862, when Mazzini unexpectedly dropped in. My cousin, Ernst Jaques, and two friends, Gustav Simon and Herr von Keudell, had met there on a short visit to London to "make music." Mazzini and myself formed an appreciative audience, as well we might, for they played Mendelssohn's D Minor Trio in masterly fashion, von Keudell at the piano, Simon taking the violin, and my cousin the violoncello part. Mazzini loved music and was in full sympathy with the performers, so naturally the conversation first turned on the beauties of Mendelssohn's work and its interpreters; but it soon gravitated to the subjects always uppermost in his mind. Herr von Keudell was particularly successful in drawing him out, perhaps because he held views opposed to those of the great patriot, and was well prepared to discuss them. He was soon to become Bismarck's confidential secretary, and as such to take an active and influential part in the chapter of history that was ere long to be enacted. In later years he rose to occupy the post of ambassador to Italy. There was much in his aspirations that interested Mazzini, and when presently my cousin asked him for his autograph, he wrote, "Ah, si l'Allemagne agissait comme elle pense." Then it was on matters revo-

lutionary that he talked, on the organization of secret societies, on his clandestine visits to countries in which a price had been set upon his head, and finally, as he got up to leave us, on the detectives he would not keep waiting any longer. They had shadowed him as usual from his house, and would not fail to shadow him back. Very sensational stories were current in reference to those clandestine visits and the disguises under which Mazzini was supposed to have travelled, but they were mere inventions, he told us. To keep his counsel about the end of his journey and the time of his leaving, to shave off his moustache and sometimes to wear spectacles and to travel quickly, were his sole precautions.

He always carried a certain walking-stick with a carved ivory handle, a most innocent-looking thing, but in reality a scabbard holding a sharply pointed blade. This is now in the possession of Mr. Joseph Stansfeld, to whom it was given by Mr. Peter Taylor, the old and trusted friend of Mazzini. He also preserves a volume of "The Duties of Man" with the dedication in his godfather's hand: "To Joseph, in memoriam of Joseph Mazzini." There is, too, a portrait of Maria Mazzini (Giuseppe's mother). It is a very poor production, and whilst it may, perhaps, give us some idea of her features, it certainly in no way reflects her lovable nature. When I knew Mazzini he was living in the simplest of lodgings, at 2 Onslow-terrace, Brompton. His room was littered with papers and pamphlets. Birds were his constant companions; the room was their cage, wire netting being stretched across the windows. They flew around and hopped about most unceremoniously on the writing table amongst the conspirator's voluminous correspondence. He had a curious way of holding his pen, the thumb not closing upon it as he wrote, a peculiarity which accounts for the crabbed character of his handwriting. Being an inveterate smoker, he and the birds were mostly enveloped in a cloud. Smoking cheap Swiss cigars, but many, was the only luxury he allowed himself.

He was the austere of Republicans, had few wants, and but slender means with which to satisfy them. Whatever he may have possessed in early life, he had spent for the cause he was devoted to; afterwards he lived on a small annuity which his mother had settled on him.

When he sat for me, I always took good care to place a box of cigars, and wherewith to light one after the other, on a little table by his side. Thus equipped, he proved an admirable model; he sat, or rather stood, with untiring energy, dictating, as it were, the character of the picture, and enabling me to put every touch from nature; posing for those nervous sensitive hands of his, for the coat and the black velvet waistcoat buttoned up to the chin—he never showed a trace of white collar or cuff—and for the long Venetian gold chain, the only slender line of light I could introduce in the sombre figure. He was indeed, I felt, a subject to stir up an artist, and to sharpen whatever of wits he might have at the end of his brush.

From Mazzini I first heard of the new enterprise Garibaldi had embarked on in August, 1862. He had once more left Caprera, and had crossed over to Calabria with the avowed intention of driving the French garrison from Rome. Mazzini was most emphatic in his condemnation of the scheme, and used strong and uncomplimentary language in censuring the action of his colleague. "But the die is cast," he said, "and under the circumstances I cannot do otherwise than give instructions to all our groups and societies to support him."

How disastrously the expedition ended we all remember. It was denounced as treasonable by the Italian government in a royal proclamation, and Garibaldi was wounded at Aspromonte in an encounter with troops sent to stop his advance. Great and spontaneous was the outburst of sympathy in England for the hero of Marsala. A small group of his friends arranged at a cost of £1,000 to send out an English surgeon, Mr. Partridge, to attend him.

It was not by him, however, but by the eminent French surgeon Nélaton that the bullet was found and extracted.

More than once Mazzini's impulsiveness, not to say naïveté, struck me. Thus one day he rushed breathlessly into my studio, with the words, "Have you heard the news? We are going to have Rome and Venice." I forget what particular news he alluded to, but remember pulling him up with unwarrantable audacity. "At what o'clock?" I asked. "Ah," he answered, "go on, go on. I am too well accustomed to jeers and epigrams to mind." I humbly apologized for my disrespectful retort, uttered on the spur of the moment; but to do so seemed scarcely necessary, for the lion evidently did not mind my taking liberties with his tail; and presently, when I said, "Well, if not at what o'clock, tell me in how much time you will have Rome and Venice," he answered, "Within a twelvemonth. You will see." I made a note of the date, but never reminded him of the incident. In his enthusiasm he had been over sanguine. "Id fere credunt quod volunt," says Cæsar in his "*De Bello Gallico*" ("they readily believe what they wish"), and Mazzini was the man of faith and aspirations. Four years were yet to elapse before Venice was liberated, and eight years before the Italians gained possession of Rome.

One of the subjects he felt strongly on was that of compulsory insurance. I cannot remember that he favored any particular scheme, but he was wedded to the principle that no man has a right to become a pauper, and that he should be compelled by law to save a fraction of his earnings, to be entrusted to the state. In old age he should be able to draw upon a fund thus constituted, and in doing so he would be no more under obligation to the state, than any man is to the banker with whom he has opened an account.

Some little notes which I received from him mostly refer to the sittings for his portrait. On one occasion I must have written that I was again conspiring against his peace, and wanted him to make an appointment.

In allusion to this he answers, addressing me as "Mon cher conspirateur." On another occasion I had put that I was one of the several tyrants who were clamoring for his head, to which his answer commenced, "Mon cher tyran." That autograph I always particularly prized, the juxtaposition of the words "Dear" and "Tyrant" in Mazzini's handwriting being, I believe, unique. In my album he quotes Goethe, "Im Ganzen, Guten, Wahren resolut zu leben," words that strike one as the appropriate motto for the man who ever sought to live resolutely for all that is good and true. His quotation, however, was not quite correct, for he had substituted, characteristically perhaps, the "True" for the "Beautiful."

Some letters addressed to his friend, Alessandro Cicognani, and dated November 15, 1849, Frontiera Lombarda, have recently come into my possession. In one of these he says:—

E tempo che ci dichiariamo in faccia all' Europa inetti a essere liberi, o che cominciamo ad agire da per noi. Noi vogliamo cacciare lo straniero d' Italia, e vogliamo che il paese intero decida liberamente della proprie sorti. Guerra dunque e' costituenta. Se vi è chi dissenta da quegli due punti, merita condanna da ogni Italiano che ami il Paese. Non si tratta più di un partito o dell' altro, si tratta di esistere come nazione e di riconoscere nella nazione la sovranità. In questi limite noi vogliamo stare, al di qua noi non diamo ormai più tregua ad alcuno.

It is time that in the sight of Europe we should either openly avow ourselves incapable of being free, or that we should begin to act for ourselves. We are resolved to drive the foreigner from Italy, and to let the whole country be the free arbiter of its own destiny. This means war. If there is any one who dissents from these two points he deserves the condemnation of every Italian who loves his country. It is no longer a question of one party or another, it is a question of existing as a nation, and of recognizing the sovereignty of the nation. Within these limits we will stand, beyond them we will henceforth concede no truce to any one.

The epistles he received he sometimes showed me as curiosities. Some came

from his admirers, others from his detractors, either usually total strangers to him. There were letters couched in terms of most eccentric adulation, others that unceremoniously relegated him to the regions of perdition. One merely requested him to go to the antipodes, in order that he might be well out of the way of regenerated Italy. Another, less urbane, addressed him as "Uomo aborrito!" ("Abhorred Man!"), and continued in a similar strain of abuse. Mazzini took it all pleasantly; the lion's tail was once for all proof against any amount of pulling. The patriotic dreams of Mazzini were gradually to be realized, in a measure, at least; for although his ideal—a republic in place of a monarchy—seemed hopeless of attainment, the hated foreigner was expelled, or had retired from Italian soil, and a united people joined hands from the Alps to the Adriatic.

He had returned to his native land, and there, active and uncompromising to the last, he died at Pisa, on March 10, 1872, in the Casa Rosselli. A private letter dated shortly afterwards, gives some particulars of his last hours. He was perfectly tranquil, and free from suffering, but sank into a gradual stupor. During the day, at times, his hands moved mechanically, as if he were holding and smoking a cigar. Madame Rosselli asked him why he did that; but his mind was wandering, he did not understand her, and answered an imaginary question. He roused himself, and looking straight at her, he said, with great animation and intenseness, "Believe in God? Yes, indeed I do believe in God." These were his last words of consciousness.

The good people of Pisa were not a little surprised when they learnt that the mild and retiring Mr. Francis Braun, who had resided within their walls for the last twelve months, was no other than the redoubtable Mazzini. Even the doctor who attended him in his last illness was not in the secret. The authorities were probably aware of his identity, but they were but too glad to leave him unmolested, knowing well how embarrassing it would have been

to proceed against him. The news that his remains had been embalmed by Professor Zorini and placed in a metal coffin, into which a glass had been inserted, with a view to exhibiting them on the anniversary of his death, raised an indignant protest from some of his nearest friends in England. They wrote warmly denouncing what they declared would most have wounded and outraged him. "His whole life," says Madame Venturi, in a letter to an Italian friend, "was one long protest against materialism, and they make of his sacred corpse a lasting statue of materialism, and of his monument an altar to the idolatry of matter. Write to the people and tell them that he expressed a wish to lie by the side of his mother."

The truth concerning the matter which led to so warm a protest, is this: Mazzini was only partially embalmed, and lay in state in a small room on the ground floor of the Casa Rosselli. A tricolor flag covered his breast, and a laurel wreath crowned his head. A plaster cast and a photograph had been taken by Allnari. On the birthday of the king of Italy and of his son the remains of their potent adversary were carried on a simple car to the railway station outside the Porta Nuova. The pall-bearers were six of his nearest friends, besides a student and a working man; deputations from neighboring cities, and crowds of sympathizers, formed a procession and lined the streets. Conspicuous on the coffin was a wreath with the inscription, "The Americans to Mazzini;" it had been placed there by the consular representatives of the United States. On its arrival in Genoa, the remains lay in state again, but for one day only. Then better counsels, more in harmony with the patriot's wishes, prevailed, and his body was placed in the sepulchre, where no human eye has seen it since. His burial-place was selected next to that of his mother, and now her tomb is enclosed with his.

It was after his death only that the great agitator's life-work began to be fully recognized by his countrymen. A

reaction set in in his favor; the Parliament of Rome passed a resolution expressing the grief of the nation at the death of "The Apostle of Italian Unity;" public meetings were held, and many were the marks of respect paid to him throughout Italy.

This seemed to me an opportune moment to add my small tribute to his memory, so I called on the Marquis d' Azeglio, then Italian ambassador to England, and offered to present my portrait of Mazzini to the Italian nation, that it might be placed in one of their public galleries. But I was to be disappointed, for the marquis bowed me out; very politely, I must say, but fully giving me to understand that it was one thing to tolerate the demonstrations in favor of Mazzini, and another to do honor to him and his portrait. The picture has since gone through one or two similar experiences. What will become of it eventually I do not know, but I am happy it is with me now.

On the second of November, some ten years ago, I happened to be in Genoa. It was the day of "Tutti Morti" (All Souls' Day), the great holiday, tearful and cheerful, on which all good Catholics make their pilgrimage to the cemeteries where rest their departed friends. A steady stream of visitors was flowing towards the "Cimitero di Staglieno." I joined it, and was soon wandering through arcades filled with marble tributes to the memory of the dead, some of the sculptors' work being very beautiful. Then, across the Campo Santo—the consecrated field—all bedecked with flowers and garlands, I came to where the path winds upwards to the graves and monuments that dot the hills above. There stands Mazzini's tomb, a mausoleum worthy of the man, severe and solemn. Two short, thick-set columns mark the entrance and carry a massive stone, on which is inscribed in plain large characters the name "Giuseppe Mazzini." That day the monument and the surroundings seemed doubly impressive, for a guard of honor had been placed to hold watch by the great liberator's tomb. It was here then that the exile and the outlaw had at last

found rest in the land he loved so well—in Genoa, the city of his birth.

I sought out a place from which I could make a water-color sketch, and, as I sat painting, my thoughts reverted with reverence and with love to the master and to the friend.

FELIX MOSCHELES.

From Longman's Magazine.
"THE 'ORSE."

"It is simply a case of rest, ma'am," said the horse-doctor, pleasantly. "The poor beast is not in his first youth, and he's a bit over-tired, that's all. You must treat him as an invalid, and you may get a few more years' work out of him yet. Good-day."

Mrs. Bottles stopped him.

"And what's to pay, doctor?" she asked, fumbling in the flat, pear-shaped pocket that hung under her gown. "You've come a long w'y, but yer know Ol'm a poor old wumman and calrn't afford much, even fer 'im. Oi wud-dent a called y'in, only a wanted ter know what yer thought to 'im."

She had found her purse—a tough leathern specimen, polished with hard wear—and now unbuttoned the flap of it, while the horse-doctor detached his nag's bridle from the gate and prepared to mount.

"It's all right, dame, no charge," he said, smiling, as he put his foot in the stirrup. "I had to come this way on another job, so it's no extra trouble. I can't do anything for the brute. Nothing but rest'll help him, and that not for long, I'm afraid. You'll have to get another, and I'll give something towards buying one. Good-day."

He settled himself in the saddle, and rode off. The old woman stood looking after him, the purse still in her hand.

"Well—thank yer, sir," she ejaculated, in time to catch his ear before he was round the corner. And then her mouth tightened curiously.

"I ain't so sure," she muttered to herself, after the manner of persons

who are much alone, "but what Oi wud-dent a rather paid 'im 'is due an' 'eard 'im speak civil o' the 'orse. Oo's 'e ter talk o' *breutes*? The 'orse ain't no more a *breute* ner 'imself; are yer, me beautee?"

The bony remnant of horsehood addressed turned his weary head slightly round, and gave the ghost of a whinny. He had never yet shown himself too tired to answer thus his mistress and lover; but now his limp legs, bending under him, trembled with the effort of response.

"Ye're to 'ave a rest, lovey, the doctor says, and some carn, an' goo out ter grass a bit. Ol'll talrke yer by the w'y—soide every d'y, an' not a step furdur; d'ye 'ear?"

"The 'orse" intimated that he not only heard, but fully understood.

"They'll 'ave ter do w'lout us, you an' me, fer a toime. Ol've worked yer too 'ard, me dear, which a moight a knowed better, that a moight. An' you never complainin,' but a gooln' on till yer nearly dropped. 'Owsomedever, they'll have ter waitr w'l ther parceln now. Ther'll be no more gooln' to Widlin ton fer you this manny a week. Not if Oi knows it."

It was with manifest reluctance that Mrs. Bottles left her equine friend alone in the nondescript structure which for the past third of a century had done duty as a stable. Originally a blacksmith's shed, built out from the side of the cottage in which the widow dwelt, its front wall of boards and rough padlocked door had been added for "the 'orse's" comfort and protection. There was just room for him and the cart within it; and, as Mrs. Bottles had stuffed up several draughty chinks with straw, it offered a gratefully warm residence, if neither very elegant nor very clean. Perfect cleanliness was, indeed, impossible under the crumbling thatch that roofed both cot and stall; for though its outer green dapple of lichen and houseleek was fair to the eye, corruption lay beneath with countless swarms of destructive insects.

When the accustomed duty of the day is set aside by untoward accident, a per-

son is often hard pressed to know what to do. So it fell out with Mrs. Bottles, who now roamed about her limited premises disconsolately, looking forward to bedtime. For nigh upon forty years she had been engaged every day in driving to Widlington, the market town for her village, Little Duckford, and for Great Duckford. During this period she had possessed but two horses—the first dying at a hoary age some twenty-five years ago—and but one spring cart (spring by courtesy!), which she often said would see the last of her. Since her children had married and gone away, one by one, she had lived alone with "the 'orse," honored partner of her labor and profit. Folk said she was "summat 'ard to get on with," and that her young 'uns had been thankful to clear out; but this may have been scandal. At all events, there had never been a difference of opinion or a wry word between her and her four-footed companion through all the long years they had lived together. She had not given him a name; maybe because her imagination was not equal to the task, but more probably because he represented the entire equine race in her mind. He was simply "the 'orse" when spoken of to others; but she lavished terms of endearment upon him privately that were far from being unappreciated by the recipient.

When she was seen walking through the village that afternoon to buy "a mossel o' carn," much concern was exhibited. Such an unwonted event aroused severe curiosity, and she was besieged with questions. In twos and threes, before the evening was over, most of the villagers had drifted to her cottage door, and their remarks, although offered in sympathy, had a bad effect on Mrs. Bottles.

"Bad job!" said one; "'e doan't much look as if 'e'll never git up no more, poor animal!"

"'Spect 'e's done 'is bit," observed another, "an 'e cairn't be over young. Ol'm seed as 'e warked aul ganglifoid-loike fer a long toime."

"Whatever'll ye do, ma'am?" asked a third, with uplifted hands. "It's stop

work, stop bread, wi' us'n; bairn't it?"

Mrs. Bottles merely grunted in reply to all these friendly commiserations, until at last one man, wishing to be especially consoling, said:—

"Well, you can git a few shillin' fer 'is carkus, anny way."

Then she struck out sparks of fury.

"Eh!" she flashed, "an' theer's some on yer 'ud sell yer own mothers fer a few shillin', if yer got the chaunst!"

She bundled into her house, and shut the door after her with an eloquent slam. Her frame was quaking with indignation, and, splash! a tear fell on the horny sinews of the hand that leant for support on her deal table by the fireplace. Sell "the 'orse's" carkus! She would be buried a pauper first! The barbarous suggestion rankled, and stung her to passionate bitterness. "Burn 'em all, they'd sell ther mothers—they'd sell ther own mothers," she said to herself over and over again.

The retort pleased her, and somewhat allayed the smart of her wound. She was glad she had told them what she thought of them, "the interferin', meddlin', cold-'arted, cacklin' bottom-fill-in's!" Yes, that was what they were, "nowt but bottom-fillin's, not wuth pickin' up. The 'orse wor better'n the lot on 'em put together." She went to sleep that night repeating: "They'd sell ther own mothers—they'd sell ther own mothers!"

Next morning she was in the stable before daylight, and a still heavier weight loaded her already burdened heart when she saw that "the 'orse" had scarcely touched his corn. He was too tired and sick to eat, poor fellow! though he took some grains from her hand to make-pretend he enjoyed the unaccustomed fare. She brought her chair and sat beside him, wishing she had not forgotten how to knit. She had always been too fagged out to do aught but clear away the supper things and get herself to bed of nights, after returning from the daily four-mile drive; therefore she had let slide all the gentle accomplishments of her youth. The strong country air made her drowsy,

and, as the journey was taken at a rate not exceeding a mile and a half an hour, the continuous jolting in a springless spring cart added exhaustion.

No one could say she had ever urged "the 'orse" to extreme speed, nor had she ever been known to threaten him with a whip. He had forgotten such an instrument existed. So he took his own time on the route, and in the palmiest days of his youth he had never loved racing. Spavins were not unfamiliar to him, and he was always a little over at the knees.

The cruel fact that he had now grown too old even for the lightest task filtered itself into Mrs. Bottles' consciousness with slow but overwhelming force. She tried to shut out the knowledge in vain, and when, at length, after a few days of silent misery, truth stamped the inevitable upon her, she wound herself up to the occasion and determined to do the work of "the 'orse" herself.

It seemed the one course open. Customers called, and frowned to hear their goods could not be taken to town that day, nor the next, nor the next. They began, presently, to talk of employing some one in Mrs. Bottles' place, for it was not always convenient to trudge themselves or to rely on the kind offices of a neighbor.

'Twas this threat roused the poor woman to action. On the morning of the third day she announced her intention of walking to Widlington, and declared she could carry a number of packets slung over her shoulders. She would have dragged the cart, had her strength been equal to her purpose. Much dissuasion was offered but she ignored it, and twice she tramped through the mud (it was February) laden like a pack-horse. She appeared to be gifted with supernatural energy, and her spirit was uplifted by finding "the 'orse" decidedly better. He had begun to eat heartily, and showed signs of returning vigor. Before starting on her journey she took him, every morning, to the roadside, and sat on a stool by him while he cropped the rich grass. It was partly through so doing, though fatigue aided, that she was attacked by

her old enemy "rheumatiz;" and on the fifth day she was quite unable to stir out—indeed, she could scarcely move in her bed.

One of the neighbors, a good-hearted body, if no better supplied with tact than the rest, called about "a harrant" (errand) for the next day, and found the carrier-woman helpless.

There was no lack of practical sympathy then, proffered in a manner that left little to be desired; for the villagers all contributed a cheerful mite of aid, bustling in and out of the cottage with a "few broth," and other delicacies likely to benefit an invalid. A sick horse was too far from kin to reach any sentiment but a trifling, half-contemptuous pity; a sick woman roused a fellow feeling, exciting every humane instinct.

Mrs. Bottles accepted all the charitable attentions of her neighbors with a "certain grim politeness. She said, "Thank yer kindly, mum. Ol'm sure ye're very good;" but she forgave none the more their objectionable speeches about "the 'orse." And she never mentioned him to them, dearly as she yearned to know how he was progressing. When, thinking to please her, they brought her reports of him, she refused to show any emotion, save a momentary gleam in the eyes she could not suppress at the news that he was "gittin' on well." The very sound of "the 'orse" in their mouths made her wince, so sensitive had she become to a suspicion of contumely; she fancied derision in every smile, and her gratitude was strongly seasoned with distrust. For well she knew that those about her could no more understand the affection which lay between her and her dear four-legged comrade than they could reap a beanfield with a jack-knife!

In a week she could move about again, and in ten days she was her normal self. It was then the real struggle began. She resolved upon pursuing the course of action initiated before her breakdown—to walk daily into Widlington with as many parcels as she could carry. It was inevitable, she foresaw, that another carrier should be sought in her place, and she resigned herself to a

poorer livellhood. But she was not going on the parish, nor did she intend to work "the 'orse." It is true he seemed much better, but he was still so shaky on his legs that she realized his present unfitness for any kind of labor. The remainder of his days must be spent in repose, unless—merciful hope whispered—he should exhibit signs of rejuvenescence with the coming spring, a miracle devoutly prayed for. But, in any case, if she could only persuade a number of her old customers to promise her the conveyance of their lighter packages, it would yet be possible to pay her rent, keep her "bits o' sticks," as she called her furniture, and live somehow. When the weather became warmer she might rest by the wayside without fear of "rheumatiz;" and, by starting much earlier than formerly, she could take more time on the journey.

But the mere proposal raised a storm about her weatherbeaten head. What! she, after being nursed by the whole village, to tempt Providence so sinfully again! Everybody remonstrated vehemently. She did not mind that. No one would promise her the carriage of a single parcel. She succumbed in despair. In vain she protested her capability, her proved strength and toughness, folling the ravages of sixty-five years: there was no moving the solid block of opposition. The village waxed angry with her at last. Why should it try to help a body "as went flyin' in the fairce o' the Almoighty, a-keepin' a lairzy 'orse a-doin' nothin' but eat 'is 'ead off in a stairble, whille she ketched rheumatics?" Even the parson expostulated.

"If the horse, my good woman," he said, "is too old for work, surely you ought not to go on keeping it when you cannot afford to do so. The knacker would give you something for its body, and you could save the cost of its food, besides the rent of the stable. All this should be considered. You might perhaps get a donkey in its place, if it is really past work; but animals become very cunning when they are indulged, and it is quite possible your beast is

only shamming. Take my advice, and give it another trial. If it breaks down, you will have done your best, and no one can blame you."

For which speech Mrs. Bottles hated him with an incontinent hatred.

She listened to the end, however, without a word, and said, "Thank yer kindly, sir," from long habit. When he had gone, she spat after him, and wished the Devil might seize his soul! Upon that she felt frightened at her own astounding wickedness, and half-expected fire from Heaven to come down and consume her. She went into the stable shed, and knelt beside "the 'orse" with a vague intention of praying; but her poor mind was a blank, and no words would come but "O Lord! O Lord!"

Perhaps this sufficed—as it should if there be One who understands; at any rate her spirit grew calmer and she rose feeling more sane.

"Lovey," she whispered, tremblingly caressing one of "the 'orse's" sensitive ears, "you'll 'ave ter goo termorrer. They wun't let yer rest in peace, darlin'. You'll 'ave ter goo ter Widdlin'ton agin, rainn or shoine, w! the sairme oia looard. Ol'd a sairved yer if a could, an' you know it, but they wun't let me. You've got ter goo, if it kills yer, an' nubboddy'll care but me."

On the following day Widdington was pleased to see, once more, the familiar figure of the old carrier-woman. It had missed her wizened, eager face, weather-tanned to a deep brick red and framed in the marvellous rusty crêpe bonnet of a previous decade. Many were the greetings she received, and "the 'orse" came in also for his share of friendly congratulation as he stood, with drooping head, before divers shop doors, resting first one hind leg and then the other in flaccid despondency.

"Better, is he? That's right! Don't work him too hard, widow."

"'Fraid you've bin ill-treatin' of 'im," chaffed another.

"You shouldn't make him gallop so fast, ma'am," laughed one.

"He'll last your time yet," several declared.

She saw the kindly humor, and replied to it with quick repartee, her eyes twinkling at her own wit. She could have hugged those who said "the 'orse" was game and would outlive her. They did her sore heart good.

But the journey home was to be faced, and, as she felt the hour of departure approach, dread thrust its fang into her brave soul.

"The 'orse" was on his last legs, and she knew it. To make matters worse, a storm of wind and rain came on, full in the teeth of the piteous animal as he crawled out of Widlington at dusk. It was nearly all up-hill to Little Duckford, and the roads were bad at this time of year. Mrs. Bottles got out and walked when she heard how desperately her poor friend was fighting for his breath. Each pant shook the rickety cart and was like a knife in her grieving bosom. She pushed behind up the second hill. It was to no avail; "the 'orse" was spent; his last spasms of breathing came at longer and longer intervals. At length he stopped short.

"Cairn't yer go on, lovey—cairn't yer? Just make one troy moore—we're near 'ome," she faltered. This was false, and of that he was well aware. They were not half-way.

With a shuddering gasp that convulsed his whole tired frame, and with one last faint gurgle in his throat, "the 'orse" sank between his shafts, snapping them as if they had been slate-pencils, to fall, an inert mass, on the roadside.

It was nearly six o'clock, and pitch dark.

Mrs. Bottles knelt down in the slush beside him, wildly imploring:—

"Beautee! lovey! darlin'! doan't yer give w'y, now—doan't yer, doan't yer. Some one'll come along an' 'elp us."

But there was no response. He would not hear her well-loved voice again. "The 'orse" was dead.

When this ghastly fact could no longer be put aside she wailed like a mother mourning a lost child. Self-reproach added poignancy to her anguish.

When she was found, nearly an hour later, soaked through with the pouring rain, she had lost consciousness; and she never quite recovered her wits again before she died. Only once did she manifest a lucid moment. It was when the doctor, who had been called in, stood by her bed, holding her shrivelled wrist in his hand.

"Theer's the—few sticks," she jerked, with great difficulty, for her jaws would not keep from shaking, "them an' a bit —o' money Oi put boy—ter pay fer the buryin'. Yer wun't let 'em—sell 'im, the 'orse—ter the knacker—fer God's sake!—Ol'd sooner they sold me!—Promise neow—swear—on yer Boible oath—they shalrn't 'ave 'im. Doan't yer let 'em—doan't yer!"

The doctor gave his word, and there was not a single villager would have had him break it. No knacker ever laid rude hands upon the mortal remains of the humble creature love had consecrated. He lies, to this day, under a spreading beech hard by the cottage once occupied by Mrs. Bottles, and the spot is often pointed out as the last abode of one who lived usefully, died honorably, was lamented deeply, and buried with respect.

MARY L. PENDERED.

From The Gentlemen's Magazine.
VICTIMS OF CIRCUMSTANCES.

There's a man who plays a paying game,
Whatever he may say—
Whose name is a great and mighty name
Over the world to-day.
Who stands at ease where others fall,
Where others sink can swim;
While those who toil and spin—yes, all
Work, sweat, live, die for him;
He's an absolute ruler, deny it who can,
Our modern monarch, King Middleman.

An ex-judge of the Calcutta High Court has recently pointed out in an interesting article which appeared in the *Asiatic Quarterly Review*, that professional Thugs, organized bands of

dakaitis,¹ and hired bodies of trained lattials² have ceased to exist in India owing to the British administration of justice. Life and property certainly enjoy a security never before known under any of the former rulers of the country, but is the *pax Britannica* an unmixed blessing to the people of India? This is a question which naturally wounds the amour-propre of the Anglo-Indians who are responsible for the government of the country; but in my humble opinion the parasite middleman, who fattens in still waters, has worked more harm to defenceless natives than the display of physical strength and the force of armed lawlessness which characterized the actions of people in authority during centuries of Indian rule. Peace of the description that now exists in Hindustan is very demoralizing, and it is a well-known fact that the people are becoming more effeminate the longer they remain under the shadow of our flag; ennui is then created, which, as Auguste Comte has pointed out, is the cause of political convulsion and change.

A month or two ago a speech was made by Mr. Sayani, in the governor-general's Legislative Council Room at Calcutta, during the debate on the Indian budget, in which this Muhammadan gentleman expatiated on the flourishing condition of the people in the *sat-yug* (golden age) of the Hindus. On the other hand, Mr. Sayani's European colleagues looked upon the *sat-yug* as an hypothetical age to which discontented native orators refer to emphasize all their bitter statements regarding the waste of the resources of their country by an alien government; and the *Times*, in a leading article on the subject, declared that "it is needless to say that the golden age is as purely mythical in India as elsewhere, but if we could regard Mr. Sayani as the exponent of the robust political economy which has been largely superseded in this country by effeminate sentimentality, there might be something to be

said for his view. The alien rulers of India have indeed gone far in the removal of the natural checks of war, famine, and pestilence upon a population which in their absence increases its numbers with no more sense of responsibility than obtains in a rabbit warren."³ The natives of India, however, can thank God that Malthusianism has not found a footing in their land. And, although the "blessings of peace" have allowed the English to cope with famines and pestilence to a certain extent, the arts and industries of India have been woefully neglected.

Only imagine the sin and folly of exporting raw material from a country which produced the rich silks, brocades, and jewellery which amazed the great Charlemagne and his rude barons. Where in the whole world is there another building to be compared with the great Rameswaram temple? regarding which Dr. Fergusson says: "No engraving can convey the impression produced by such a display of labor when extended to an uninterrupted length of seven hundred feet. None of our cathedrals are more than five hundred feet, and even the nave of St. Peter's is only six hundred feet from the door to the apse. Here the side corridors are seven hundred feet long, and open into transverse galleries as rich in detail as themselves. These, with the varied devices and mode of lighting, produce an effect that is not equalled certainly anywhere in India. . . . Here we have corridors extending to four thousand feet, carved on both sides, and in the hardest granite. It is the immensity of the labor here displayed that impresses us much more than its quality; and that, combined with a certain picturesqueness and mystery, produce an effect which is not surpassed by any other temple in India."⁴ There is no getting behind the fact that a very high state of civilization prevailed all over India in prehistoric times, as even in the wildest forest regions there is evidence that the land at one time was under cultiva-

¹ Highwaymen.

² Clubmen engaged for riots.

³ *Times*, March 29, 1897.

⁴ Fergusson's "History of Indian Architecture," pp. 358, 359.

tion. Moreover, the ruined and buried cities, the innumerable temples and tombs of indescribable beauty, the large forts and their intricate defensive works, the magnificent water-storage lakes, the anicuts and irrigation canals are in themselves monuments of the golden age.

I may as well explain to the English reader that the Hindus divide their history into four yugs or ages; and in their sastras it is asserted that these yugs show a progressive advancement in vice and misery. For example, in the sat-yug (golden age) all was purity, the life of a man being passed in the worship of God and in universal benevolence. After this came the treta-yug, when sin was first introduced into the world. The third was called the dwápar-yug. And the present age is the kali-yug, in which all is supposed to be sin, the signs of the kali-yug being sorrow, wretchedness, and disease. In this age the people are supposed to be proud and vile, and devoid of all proper feeling towards their parents; the Brahmans are without accurate knowledge of the Vedas, the mixture of castes has commenced, and men are steeped in sensuality. The women are also supposed to be universally corrupt at heart, caring only for pleasure-seeking. The rich are puffed out with their own pride, and look upon themselves as the salt of the earth; and the Brahmans bow down to wealthy Sudras who practise usury and other oppressive forms in their business transactions. Well, the records of the civil courts in every district of India will prove that the above-mentioned prophecy has been fulfilled in its entirety, bringing ruin in its train.

The railways, instead of lightening the burden of debt, have helped to make the fortunes of middlemen at the expense of the ryots. And yet the trading classes are not satisfied with what has already been done for them, as they are still clamoring for further extension in the railway system, as will be seen by the following extract from the *Economist* of April 24, 1897:—

It will be remembered that in response

to a very reasonable demand for the extension of railways, put forward by the *commercial communities* both in India and in this country, the Secretary of State agreed to the total expenditure by the State, and by companies guaranteed by the State, of Rx 28,000,000 during the three years 1896-97, 1897-98, and 1898-1899. The main details of this expenditure, and the manner in which it was to have been incurred, were settled at the Railway Conference held at Simla, under the presidency of the Viceroy, in September last. The programme adopted was as follows:—

	1896-9 Rx.	1897-8 Rx.	1898-7. Rx.
From Imperial funds . . .	8,465,300	8,620,000	8,980,500
Capital of Indian Railway Companies . . .	2,290,000	3,710,000	4,194,500
Total . . .	7,695,300	10,130,000	10,174,700
	28,000,000		

During the past year the expenditure incurred against this forecast is expected to amount to Rx. 5,256,900 from Imperial funds, and Rx. 3,500,400 from capital of railway companies; while the Budget estimate for the present year provides for an expenditure from Imperial funds of Rx. 6,700,000, and from capital of companies of Rx. 3,430,000. *There is, in addition, in each year the usual expenditure of Rs. 750,000 from loan funds on irrigation works (the italics are mine).* It is evident, therefore, that the government intend to adhere to their original railway programme of Rx. 28,000,000 for the three years, notwithstanding the fact that the resources of the country are so grievously strained to meet the heavy extra expenditure and losses of revenue due to plague and widespread famine, and although it is, we believe, an open secret that the finance minister is opposed to this policy, and unsuccessfully pressed his views on his colleagues in Council.

It is very evident that this action on the part of the majority of the members of the Council meets with the thorough approval of King Middleman, although he has said nothing about the mean way in which the irrigation works are being starved. India would, therefore, be the better of having in every province some scientific agriculturists, so as to check this insane expenditure of money on railways which have a scourging effect on the land. To give the reader an idea of the condition of the ryots of those provinces where railways have been in

existence for the last thirty-five years, the following extract from a speech made by Mr. J. A. Anderson (a leading Calcutta merchant) at the Calcutta Chamber of Commerce in 1892 is now quoted: "But this is trifling to the mess that is being made in India itself, where the transferring of the wealth from one class of people to another is being carried out in a wholesale manner. The decreasing value of the rupee has caused a drain of all available produce from the country. Lately we had freights at £1 per ton from Calcutta to London, and exchange at 1s. 3½d., but it could bring out nothing from the fertile valley of the Ganges. *The place was clean swept*" (the italics are mine). "We had last year a bumper crop of rice, but we finished the season with ballam at three rupees ten anas per maund, or at close on famine rates. This cold-weather crop is not a good one, and already we see speculators buying and storing rice. The same thing is taking place in the North-Western Provinces, where wheat is now at double its former value, and people are starving, not because food grains are wanting, but because wages have not gone up in proportion to the cost of food." If the fertile valley of the Ganges was "clean swept" of its produce in 1891, which was a year of bumper crops, what is the object in increasing the railways? Mr. Anderson's statement is a clear indictment of the middleman and all his ways, although, perhaps, the good man did not intend others to see it in that light. But the government had to open relief works in many of the districts of Bengal and Behar in 1892, so as to keep the people alive after their produce had been swept off to distant markets; and yet, notwithstanding the many bitter lessons which are being administered, we still gaily go on with railway construction throughout India. It would be impossible for the most enthusiastic supporter of railways to prove that they tend to cheapen food grains and the simple necessities of life in a country where, according to Sir W. W. Hunter, twenty-four million people go through their lives in a state of chronic hunger.

It is, therefore, not surprising that the natives now truly believe that the kallyug has visited them in deadly earnest.

My sympathies are all with the people in this matter. The past glories of their country appeal strongly to the imagination; and, as agriculture is the chief industry, it is, to put it mildly, folly to neglect irrigation works and devote all our energies to the construction of railways. In prehistoric times irrigation was carefully practised in all the provinces of India, and many of the ancient anicuts and the immense irrigation tanks and reservoirs, which were made by the old Hindu kings, are the wonder and admiration of all intelligent observers. These useful works are to be found all over India and Ceylon, and it is probable that most of them were constructed during the period of the Buddhistic supremacy. In Mysore alone there are 37,682 tanks, which vary in size from small ponds to extensive lakes, and Colonel Wilks, in his "History of the South of India," says that "the dreams which revealed to favored mortals the plans of these ingenious works have each their appropriate legend, which is related with reverence and received with implicit belief." Every deep valley in the hills of India ought to be formed into an artificial lake. The ancient Hindus never spared labor and expense in the construction of these works, which are things of beauty, as will be seen from the following graphic description of an artificial lake in the Central Provinces, from the pen of Sir Richard Temple: "There an irrigation tank is not a piece of water with regular banks, crowned with rows or avenues of trees, with an artificial dyke and sluices, and with fields around it; but it is an irregular expanse of water; its banks are formed by rugged hills, covered with low forests that fringe the margins where the wild beasts repair to drink; its dykes, mainly shaped out of spurs from the hills, are thrown athwart the hollows, a part only being formed by masonry; its sluices often consist of chasms or fissures in the rock; its broad surface is often, as the monsoon approaches,

lashed into surging and crested waves." On the borders of these lakes, wherever the most splendid views are unfolded, will be found ancient temples of infinite beauty and design. Even in Bundelkhand, which is now looked upon by the English as the poorest and most backward part of India, there will be found numerous ruins, large tanks, and magnificent temples, built chiefly of hewn granite and carved sandstone, all of which are marvellous exhibitions of human labor, and attest the prosperity of the Chandel Rajputs who flourished at a period when our ancestors were naked savages. But how has Bundelkhand fared since the principality of Jhansi was confiscated in 1854 by Lord Dalhousie? Money has certainly been spent freely on it, as it has been given a railway (the Indian Midland) which cost nearly £7,000,000 sterling; it has also been given the Betwa canal; but still its people are unhappy and poverty-stricken in a manner which proves that intelligent enterprise is wanted to develop the resources of their country. Bundelkhand is rich in minerals, excellent iron being found in the province; diamond and copper mines are also worked on a small scale. But the raging torrents of its hill-streams are in themselves mines of untold wealth if they were harnessed for the purpose of generating electricity. India will awake from its lethargy when the storage of water is properly attended to in all the deep valleys lying in the midst of its mountains, so that electric power may be applied to industrial purposes and to drive the trains in favorable localities.

The future belongs to the Indians, if they are properly assisted by the government, as there is no lack of energy and resource in the native character, although, according to Adam Smith, "no society can be flourishing and happy of which the greater part of the members are poor and miserable." In ancient days the ploughs of the Indian cultivators were drawn by horses, now bullocks and buffaloes have to do the work in a perfunctory manner; and in the Vedas descriptive accounts are given

of the various professions which flourished under the support of native governments. The Greek ambassador and topographer, Megasthenes, who resided at the court of Chandragupta (Sandrakottos) in the fourth century B.C., gives an intelligent account of the arts and manufactures of that period, and he quaintly remarked: "The Indians were skilled in the arts, as might be expected of men who inhale a pure air and drink the very finest water." Then why should the descendants of these men be reduced to selling the raw produce of the fields for the purpose of being exported out of India?

I have already alluded to the fact that the people are degenerating and becoming more effeminate owing to the *pac Britannica*. The late Sir James Caird, who was a most keen and intelligent observer, remarked on the more manly bearing of the people in the native states. In some things, however, even the natives of Bengal and Behar are wonderfully courageous, and the bravest deed that I ever witnessed was performed in the coolest manner possible by two of my own domestic servants. One morning, while seated in the verandah of my bungalow, a mad jackal rushed through the grounds and went under a raised godown, which was close to the bungalow. I left the verandah for my gun, and on my return I discovered two of my servants armed with hog-spears creeping under the godown until they came within striking distance of the jackal, when they quickly transfixed him with their spears. The offer of a blank cheque on the Bank of England would not have induced me to act in the way that these brave fellows did. An old mihtar (sweeper), a man of the lowest caste in my service, who was nearly bent double with age, was the smartest hand at killing a venomous snake that I ever knew. The old fellow used to sit up at night in the fowl-house for the purpose of destroying the cobras that came after the eggs; and one morning before dawn I stepped into the verandah of my bungalow in time to see him pulling a karait out of a hole with one hand,

which grasped the reptile's tail, while in the other hand was held a stick which promptly descended on the karait's head as soon as it appeared in view. It was all done very neatly and smartly, and as quietly as if the old man had been crushing a beetle.

Bengalis are stigmatized as a race of cowards by their detractors, but the following graphic description of how a gang of Bengali dakaites met their death in the year 1810 will prove that some of them can die with a laugh and a joke on their lips: "On the night previous to the execution of a notorious gang of dakaites in Zillah Kishnagar, I went into the condemned hold to see and speak to them. I found them employed in smoking their hukkas and telling stories. In passing the hukka one of the gang, who was a Muhammadan, refused to receive it from his sardar or leader, who was a Hindu; on which the Hindu abused him, and, laughing, asked him what would be his caste next day, and whether they would not all meet in Jehanampur (meaning hell). The Muhammadan then took the hukka. They all entreated me to beg of the judge that they might have kids, fowls, and other things allowed them next day, in order that they might have one good dinner. The following day, on going to the gallows, they were with difficulty prevented from singing and clapping their hands, which they had begun to do." Dakaites and laltials were turbulent gentlemen who spoiled the business of peaceful traders and rack-renting middlemen; but I must say that the natives of British India were a manlier and more athletic race in the old lawless times than they are at present. And the rogues had a keen sense of humor with it all, as a Tirhut planter found to his cost when he went one morning to dispossess some ryots of their fields. "Oh, you want these fields for indigo?" inquired the ryots in the politest manner possible. "Yes," replied the planter, as he proceeded to turn his factory ploughs into a field. "Very well," re-

torted the ryots, "we'll use your body as a *henga* (harrow) to pulverize the clods;" and without more to-do they pulled the unfortunate man off his horse, and, tying ropes to his hands and feet, dragged him over the fields in the manner in which their harrows are worked. The planter, being a good-natured soul, delighted in telling the story at his own expense.

It must have been the grossest mismanagement that forced the Bengal sepoy to mutiny in 1857, as the deepest sympathy exists between Europeans and natives who have worn the queen's uniform, this sympathy extending even to the camp-followers, as exemplified in Rudyard Kipling's well-known ballad "Ganga Din." The barber, too, is another most important man in his way, and I have in my mind's eye a retired regimental barber, who now lives in the town of Chapra. His father was a camp-follower before him, and Tom is proud of having been born in a Highland regiment. There is no question of his bringing-up, as he speaks idiomatic English with a strong Scottish accent. In personal appearance he is tall and very black, withal a man of aldermanic proportions; and it is very droll to hear him roll off his stories in "the braid Scottish tongue." Tom's dress is worthy of the man; he wears a pair of tartan trews, and places a sporran over his capacious paunch, which is decorated with the regimental badges of the 72nd, the 78th, and 79th Highlanders. The rest of Tom's costume is, however, distinctly Oriental, as he dons an immense red-and-white pagri and the ordinary white cotton coat of the domestic servant. But even then Tom is a sight to be remembered, and I shall never forget the astonishment of a friend of mine when he met the old camp-follower for the first time. My friend was quietly reposing in his room after having come in from his morning ride, when a wonderful apparition with a flourish of an immense white cotton sunshade swaggered into the verandah. The sahib being under the impression that an escaped lunatic was intruding, shouted for the chaprassi to turn him

¹ Tytler's "Considerations on India," vol. i. pp. 233-34.

out. "Guid Lord! ye needna do that. I am only Tom the barber," said the old fellow, exhibiting his credentials in the shape of a shaving-soap pot and a case of razors. A few explanations followed, and the sahib and Tom soon became fast friends.

Tom was a very old and experienced campaigner, with a fund of anecdote at his command. He had been as a child with his father in Afghanistan; he had followed the British troops in a war with Burma; he was with the 78th Highlanders in Persia, and then followed the fortunes of this distinguished regiment during the whole of the Indian Mutiny campaign in Upper India. He was also with the 72nd and other regiments in numerous frontier wars. Tom, therefore, may safely be accepted as an authority on the British soldier, for who could scrape a closer acquaintance with Mr. Atkins than the man who shaves him? I am myself a great admirer of Mr. Atkins, as the happiest days of my childhood were spent in the old castle of Edinburgh among the red-coats; and I must say that I love Tom for having nothing but praise for the man who has made the British Empire what it is to-day:—

Winds of the world, give answer! They
are whimpering to and fro—
And what should they know of England
who only England know?
The poor little street-bred people chat
vapor and fume, and brag,
They are lifting their heads in the still-
ness to yelp at the English flag.

is the answer which we throw back to those good people who want us to be a nation of cats instead of a nation of tigers.

Lord Roberts, in his well-known book, "Forty-one Years in India," tells us that "no comparison can be made between the ambitious races of the North and the effeminate peoples of the South." But why is it that the Dravidian races have degenerated so rapidly under British rule? Lord Roberts is not alone in his opinion, as the government of India for many years has been harping on the degeneration of the Madras

peasantry, and this is what a highly-placed officer, Sir Henry Norman, said on the subject so far back as the year 1870: "It is a fact, which no amount of disputing will disprove, that the martial spirit of the Madras cavalry and infantry has died out." This statement is enough to make any old Madras officer to turn in his grave, as no trace can be found of any admission or suspicion of the inferiority of Madras sepoys in the days when the heaviest demands were made on their prowess. Sir Thomas Munro knew the Madras army well; he had seen the troops of all the three presidencies in action; and this is what he wrote when it was proposed that the subsidiary force at Hyderabad should be relieved with Bengal sepoy regiments: "Where troops are in all respects equal, there is still an advantage in having those who are to act together drawn from one and not from different establishments; but the coast troops are perhaps in some respects superior to those of Bengal. They are more regular, more tractable, more patient under privations, and they have been more accustomed to military operations. If this is true, the argument against employing Bengal sepoys in the Deccan becomes so much the stronger, for why bring them here when we have better on the spot?"¹ In the days when the Madras army was second to none, there was a large proportion of Scotsmen among its officers; and the old 74th and 78th Highlanders were the two British regiments which fought shoulder to shoulder with Madras sepoys in some of the fiercest fights that took place on Indian soil. My mother's father was an old 74th officer; and on my father's side all his mother's brothers were in the Service, as will be seen from the following inscription on a tombstone in the old burying-ground of the Macleods of Drynoch, in the Isle of Skye:—

Underneath are the remains of Donald Macdonald Macleod, Lieutenant, 50th Regiment Madras I., who died at Drynoch in 1837, seventh son of Norman Mac-

¹ Gleig's "Life of Sir Thomas Munro (1830), vol. iii., p. 193.]

leod of Drynoch, and Alexandrina Macleod of Bernera, whose eldest son Donald died at Gravesend in 1824, Captain 78th Regiment. Norman died in Java, in 1814, a captain in the same corps. Alexander died at Forres, in 1828, a major in the 12th Regiment B. N. I. John died a captain in 78th Regiment during passage home from Ceylon. Roderick died at Killegray from a hurt received in action on board the Belvidera frigate on N. A. station. Forbes died in Madras a lieutenant, 12th Regiment N. I. This stone is dedicated to the memory of the above-named by their sorrowing mother and her surviving sons, Martin, late 27th, 79th, and 25th Regiments, now of Drynoch, and Charles, now of Glendulochan, 1839.

I give the above record of some of my fighting kinsmen who sacrificed their lives in the East in the service of their country, as the Anglo-Indians, who only know me as a planter, entertain a strong suspicion to the effect that I am a traitor in disguise, owing to the manner in which I espouse the cause of the natives against European traders. But I may well inquire, how shall I address that large class of Anglo-Indians with whom rupees are always a weightier consideration than duties? In our pursuit of the almighty rupee we forget to take any interest in the welfare of the natives, with the result that we spend our lives in complete ignorance of their thoughts and aspirations. Has not William Watson told us that

Hate and mistrust are the children of blindness;

Could we but see one another, 'twere well!

Knowledge is sympathy, charity, kindness,

Ignorance only is maker of hell?

If the Tamil and Telugu speaking races of southern India have so degenerated that they are now only fit to be hewers of wood and drawers of water, it is solely owing to our present system of government, which, as Sir Thomas Munro pointed out to Canning, is "much more efficacious in depressing them than all our laws and schoolbooks can be in elevating their character. . . . The improvement of the character of a people, and the keeping them in the

lowest state of dependence on foreign rulers, to which they can be reduced by conquest, are matters quite incompatible with each other." I believe thoroughly in military officers as administrators, for one has only to turn to the many valuable books which were written by the British military officers of the East India Company to judge of their sympathetic demeanour towards the natives, and the following extract from Welsh's "Military Reminiscences" is well worth quoting. Welsh, first of all, describes how splendidly the Madras troops behaved at the battle of Argaum, which was fought on November 23, 1803; and he then goes on to tell how a native officer met his death:—

Subadar Ali Khan, a man so uncommonly diminutive in person that we used to call him the little cock sparrow, was one of the best and bravest soldiers I ever knew. He was at this time far advanced in life, as he had earned the respect and esteem of every European officer, as well as of every native in the corps; and, what was very remarkable, this Lilliputian hero had as strong a voice as he had a great soul. In action he was the life and soul of those around him, and in devoted affection to the Service he had no superior. The whole of the flesh and sinews of the hinder part of both thighs being torn away by a large shot, he fell, and could not rise again; but as soon as the action was over he requested his attendants to carry him after us, that his dear European comrades might see him die. We had halted on the field, upwards of a mile in front of where he fell, when he arrived, and spoke to us with a firm voice and most affectionate manner, recounted his services, and bade us all adieu. We endeavored to encourage him by asserting that his wound was not mortal, and that he would yet recover. He said he felt assured to the contrary, but he was not afraid of death; he had often braved it in the discharge of his duty; and his only regret was that he should not be permitted to render further services to his honorable masters.¹

Here is another incident of the battle of Argaum, which is worth recording in this article on "Victims of Circumstances:"—

¹ Welsh's "Military Reminiscences," vol. I., pp. 193, 194.

Lieutenant Langlands, of the 74th Highlanders, was close to us in the action, when a powerful Arab threw a spear at him, and, drawing his sword, rushed forward to complete his conquest. The spear having entered the flesh of the lieutenant's leg, cut its way out again and stuck in the ground behind him, when Langlands grasped it, and turning the point, threw it with so true an aim that it went through his opponent's body, and transfixed him within three or four yards of his intended victim. All eyes were for an instant turned on these two combatants, when a sepoy of our Grenadiers rushed out of the ranks, and patting the lieutenant on the back, exclaimed, "Achha kiya, sahib, bahut, achha kiya!" (Well done, sahib, very well done!) Such a ludicrous circumstance, even in a moment of extreme peril, could not pass unnoticed, and our soldiers all enjoyed a hearty laugh.¹

Now, these Madras sepoys were at the time engaged in doing battle with the fierce Arab spearmen, and yet they could coolly "enjoy a hearty laugh" in the middle of a desperate engagement. These Arabs are of the same kith and kin as the ancestors of "Fuzzy-Wuzzy," who has been immortalized by Rudyard Kipling as a first-class fighting man. Kipling's hero, Tommy, tells us that

We 'eld our bloomin' own, the papers say,
But man for man the Fuzzy knocked
us 'oller.

Again Tommy confesses that

When 'e's 'oppin' in an' out among the
bush
With 'is coffin-headed shield an' shovel-
spear,
An 'appy day with Fuzzy on the rush
Will last an 'ealthy Tommy for a year.

From the above it is evident that the races of the Soudan have not degenerated. Then why is it that the Madras sepoys have lost their fighting spirit since their country has been under British rule? King Middleman, sitting on his money-bags, must have to answer this question.

¹ Welsh's "Military Reminiscences."

DONALD N. REID.

From Travel
TO THE SUMMIT OF THE JUNGFRAU BY
RAIL.

Those who are disposed to look upon the construction of every new mountain railway as a fresh act of violence upon the physical beauties of nature, and who feel even so modest an undertaking as the Snowdon Mountain Tramway to be altogether a thing of horror, will hear with something like despair of the scheme of Herr Guyer-Zeller, which has now passed beyond the theoretical into the experimental stage, for the construction of a line of railway up to the summit of the Jungfrau. Anything more daring and gigantic in the way of railway enterprise it would be difficult to conceive. Even in Switzerland, the land which has given us already some of the boldest and most romantic examples of applied engineering science, nothing like it has yet been attempted. The Pilatus line may still have steeper and more perilous gradients. The great tunnel of the St. Gotthard will still be longer than all the tunnels of the Jungfrau. The Rigi may continue to be the most popular, as it is certainly the oldest of the Swiss mountain lines. But none even of these great works strikes one's imagination as does this new proposal to carry the tourist, in defiance alike of rock, glacier, and avalanche, up beyond the snow-line to a point 13,670 feet above sea-level, from which he may look not only upon the green pastures, the blue lakes, and the glittering snow-fields of Switzerland, but also upon Italy's Monte Rosa, upon France's Mont Blanc, and upon the far-away shadows of Germany's Black Forest.

Any who are familiar with central Switzerland will be sure to be familiar, too, with the striking outline of the Jungfrau, and the majestic place it occupies amid the giants of the Oberland. Within recent years at least three distinct schemes, those of Trautweller, Köchlin, and Locher, have been suggested for carrying a line of railway up to its summit. All had their base in the Upper Lauterbrunnen Valley, and all in turn came to be regarded

as impossible. The construction a few years ago of the line over the Wengern Alp offered, however, a new base for operations, and this Herr Guyer-Zeller now proposes to utilize.

A few words will suffice to make the geographical position tolerably clear. Starting from Interlaken, the Valley of the Lutschinen continues as far as Zweisulchinen, where it breaks into a fork, one branch terminating at Lauterbrunnen and the other at Grindelwald. These extreme points, separated by that pleasantest of mountains, the Wengern Alp, are now connected by a line which runs over the mountain from valley to valley. If the tourist takes his stand at the Little Scheidegg station on this line, with his back towards the Mannlichen, he has in front of him a noble cluster of snow-capped mountains, of which, for the purposes of this article, three only need be mentioned—the Eiger on the left, the Jungfrau on the right, and the Monch between the two.

The Scheidegg station, 2,060 metres¹ above sea-level, will be the starting point of the new line. From here the Jungfrau railway will run on the western slope of the Fallbodenhubel, making straight for the foot of the Eiger Glacier; thence it will turn due east, and later on due south in a tunnel winding round the solid body of the Eiger as far as the Eiger Station, 3,100 m., which is to be laid open by galleries similar to those on the Axenstrasse between Brunnen and Fluelen. The tunnel will then proceed in a direct line towards the Monch and the Jungfrau-joch, which it will reach at 105 m. below the surface. It will finally curve round the upper pinnacle of the Jungfrau and terminate on a plateau, well known to guides, at 4,100 m. above sea-level. This platform lies just 65 m. below the summit, measures 25 by 30 m., and is generally clear of snow during the summer months. From this level a lift—probably something after the style of the American elevators—will take the passenger to the highest peak. The

present proposal is that the elevator should consist of two concentric iron cylinders, placed telescope-fashion one within the other. The inner one will contain the lift, and between the two a corkscrew staircase will be fitted, so that the tourist may either complete the journey by the lift or climb the distance from the terminal station to the summit on foot.

Scheidegg station being the starting point, the same class of permanent way and rack rail will be used as that on the Wengern Alp Bahn. The total length of the line will be 12,443 metres, and it will be divided into six sections, with intermediate stopping places and stations to be known as Eiger Glacier, Grindelwald Gallery, Kalifirn (Eiger station), Mönchjoch, Aletsch Guggl (Jungfrau-joch), and Jungfrau (terminus). The maximum gradient will be one in four, and the minimum one in ten—quite an easy climb compared with some of the Swiss lines. The journey up is timed to occupy exactly one hundred minutes, and the speed will average about eight kilometres¹ an hour. The company have power to charge forty-five francs for the ascent and descent, but they have decided to issue the return ticket for 40 francs. During the season, which opens on June 1st and closes on September 30th, five trips will be made daily, and accommodation will be provided on each train for eighty passengers. It is intended, however, to run "specials"—unromantic word—between the Scheidegg and the Eiger Glacier, which is expected to become an exceedingly popular section. The nominal capital required is ten million francs, but the promoters estimate with some show of confidence that the actual cost will not greatly exceed eight million francs. As motive power it is proposed to use electricity; and the Trummelbach and Black and White Lutschinen will supply more than sufficient hydraulic pressure for all the purposes of the undertaking. At as frequent intervals as the nature of the route will permit, ventilating shafts are

¹ A metre is equal to 39·37 English inches.

¹ A kilometre is equal to 0·621 English mile.

to be driven from the tunnels to the surface, and, if at all possible, the electric light will be introduced.

The Act of Concession for the new line was granted by the Swiss Federal Assembly on December 21st, 1894. It stipulated that within eighteen months from that date complete plans of the scheme would have to be deposited, and that within six months dating from the acceptance of the plans earthworks must be commenced. The line, which is to be completed in five years, will be constructed and opened for traffic section by section. Already waterworks are proceeding at Lauterbrunnen, and the building of the first portion of the railway, that from the Scheidegg station to the tunnel entrance, has begun. This section, the promoter assures us, will be opened for traffic on August 1st next.

Apart from the railway itself, the terms upon which permission for its construction has been given, are worthy of note. The concession is granted for eighty years, and the Swiss government, ever careful about national rights, has taken care to see that the scheme is made to serve other purposes than that of merely earning a dividend for the shareholders. In the first place the company is bound at all times to permit persons making the ascent on foot to have access to all parts of the mountain, free of charge, and without restrictions of any kind. Then, again, articles of scientific interest brought to light in the course of the excavations, such as fossils, coins, and medals, become the public property of the canton in whose territory they are found. But most important of all is a clause under which the company is required, upon the completion of a part or of the whole of the line to spend a sum of at least one hundred thousand francs in erecting and equipping a permanent observatory, to be specially designed for the purpose of assisting meteorological, tellural, and other forms of physical research. Beyond this, the company undertake to contribute a monthly subscription of one thousand francs towards the expenses of the undertak-

ing. This arrangement, supplemented as it will be by the erection of a series of meteorological stations at different altitudes along the line, promises to furnish Switzerland with a physical observatory of the very first rank, and ought to lead to substantial and interesting results.

It was inevitable that an undertaking of the kind I have shortly described should meet with opposition upon both practical and æsthetic grounds. The promoters have frankly recognized the objections and done their best to answer them. The first, and perhaps the most alarming, since it relates to the study of hygienics, is that embodied in the two following questions: "Will the health of a person of sound constitution be injuriously affected by his conveyance, within the space of two hours, from a level of 2,000 m. to one of 4,166 m., and by the consequent rapid abatement of atmospheric pressure?" Secondly, "Will such an ascent be attended by evil consequences to a person suffering from organic disease?" Upon these points and upon the general question of what "mountain-sickness" really is, a great volume of expert evidence is produced. Briefly stated, it leads up to the conclusion that, except in special cases, mere rarity of air does not produce the symptoms of asphyxia known as "mountain-sickness," except when acting in conjunction with the effects of bodily exertion and fatigue. For example, the committee of the Swiss Alpine Club declare themselves to be "perfectly convinced that, given a means of being conveyed to the summit without any kind of muscular exertion, persons in good health and of sound constitution have no evil consequences whatever to fear from a short sojourn at the top of the Jungfrau." In the case of the more delicate class of persons another answer is furnished. It is pointed out, quite appositely, that a sea trip, an ordinary railway journey, and, most of all, a stiff climb, would all be more or less dangerous to those in feeble health. Yet persons of this class indulge in these things, and no one suggests that they should be prohibited

from doing so. But if the objection in the present case should be pressed to the extreme point of prohibition, the final answer takes the form of an offer to post a medical man at the Scheidegg Station for consultation in doubtful cases.

What is called the "aesthetic objection" is embodied in the question, "Will the mountain scenery be disfigured by the building of the Jungfrau railway?" The promoter at once responds with an emphatic "No," based upon the fact that the line, except for the first section, will run in tunnels all the way, and will thus remain invisible. On the more general and much debated point whether the mountain railway, as an institution, is a blessing or a curse, little is said, and in Switzerland, at any rate, little needs to be said, for the construction and profitable maintenance of about forty mountain lines, beginning with the Rigi and ending with the Wengern Alp, furnishes conclusive proof that with the Swiss and with the people who visit their country utilitarianism is a stronger force than aesthetics.

The mountain railway, it is true, is not free from objections, but neither are the other contrivances by which our mountain tops are brought within reach of those who have not the physical strength to scale them. Horses may be hired at moderate fees, but many are too weak or too nervous to take the saddle. Then there is the chaise-à-porteurs, much patronized by ladies. This is considered a rather jolly way of getting up the hill—for the passenger; but the sight of three hapless guides struggling up steep mountain slopes under the weight of a portly lady is alike distressing whether viewed from the humane or the artistic standpoint. One would prefer, of course, to be without the company of steam whistles and electric trams, but since they have become inevitable, there is no reason why they should spoil the music of the cow-bells, or dwarf the giant forms amid which they move, or make the falling avalanches less impressive than when Byron listened to them and pelted his

friend Hobbouse with snow. Those who think otherwise might do well to remember that there are few things in this world absolutely good or utterly bad. As Emerson would say, "For everything you lose you gain something; a certain compensation balances every gift and every defect." And if the mountain railway has somewhat dashed the ideals of the few, it has certainly given to the many a new vision of mountain glories.

F. E. HAMER.

From The Spectator.

THE BARNATO SUICIDE.

It is not difficult to understand the great interest taken in the suicide of Mr. Barnato. Apart from his connection with some thirty companies, all of which will feel more or less the impact of his death, his career had been watched with an interest which both in its degree and its cause has been a little unusual. He was the commonest of the new millionaires, and at one time it seemed possible that he might become the biggest. A great number of average Englishmen would like to become fabulously rich if they could come so by pure volition, and it really seemed as if Mr. Barnato had realized that ideal. He was a "plain man," if ever there was one, a little Jew from Petticoat Lane with no particular education, and except unusual financial courage, rising some times to Napoleonic audacity, no qualities beyond such as are common to the thousands whom he left behind him in the squalor of the Ghetto, and he rose to the top of the shadier financial world. He had been an adventurer in South Africa without a penny, odd man in a Kimberley circus, a pedlar in diamonds, a small jobber in shares; yet before he was forty he was reputed to be worth seventeen millions, and probably, if his shares in his own companies had maintained their value, would really have possessed seven. He entertained with profusion, he built a palace for himself,

not yet finished, in Park Lane, and he was understood to be of all the speculators there the one who had most influence with the governing group at Pretoria. That seems to the lower English middle-class man immense success, and it was achieved by one who, to external seeming, was like a prosperous little tradesman, and who, whatever his capacities, had none of those which we associate with greatness. Anybody might be a "Barney Barnato," and as he got so far ahead of the ruck, everybody felt interested to see what would become of him. He might die a peer or in a ditch, and the news that he did die a suicide, that the pressure of immense and risky transactions had broken down even his nerve, and worn out even his hopefulness, came on the man in the street, to whom the Stock Exchange is something of a mystery, with a recognizable shock. That kind of career, then, was not so pleasant after all, but had drawbacks which even the hunter after wealth would not, if he fully recognized them, be quite willing to face, anxieties more keen and more imperative than those which beset the well-trodden ways. It is hardly worth while to make millions and die so,—that was the reflection, spoken or unspoken, of thousands who, while the great speculator was alive, had regarded his career with a feeling which, if it was not envy, was something exceedingly like that dirty passion.

We do not believe the assertion that rapid commercial fortunes are always obtained by fraud, and though we dislike monopolies, think a monopoly of diamonds, which was the original foundation of Mr. Rhodes's, Mr. Beit's, and Mr. Barnato's wealth, the least injurious to mankind of all the trusts by which the world is nowadays pillaged for the benefit of a few. We have no means of knowing whether Mr. Barnato ever stepped over the line which divides sharp trading from deception on investors—we fancy he had a conscience somewhere if it is true that his biggest feat of "promoting" was accomplished without the issue of any

kind of prospectus, the promoter trusting entirely to the magic of his name—and we shall not therefore moralize about his career; but we wish we could form a definite opinion whether the rise of the new millionaires is economically beneficial or not. That most of them are socially nuisances, because they promote the worship of wealth, and degrade the ideal of ambition, is undeniable; but are they also nuisances from the economic point of view? A great many keen-sighted people say they are, that mammoth fortunes are only made by taking enormous risks, that such risks turn both commerce and associated enterprise into gambling contrivances, and that the effect of millionaires' transactions is to take away from steady industry much of the profit which alone makes it attractive to the majority. Why keep cows if somebody else is to have most of the milk and all the cream? Banks would do as reservoirs of capital just as well as millionaires, and would not have the same interest in crushing out small men, or the same means of establishing monopolies, which latter must be, by the very law of their being, deductions from the temptations to industry and the opportunities for it. If one man owns all the paper-mills, paper-making ceases to be one of the industries on which the average man can embark. A sort of hopelessness is spread through the industrial world by such competition, and because one Rockefeller "goes in" for oil-dealing ten thousand families are shunted out of a profitable and beneficial method of earning a quiet living. There is and can be no answer to those arguments, but they do not quite cover the whole area of discussion. Big trees keep the sun from the corn, but big trees have their uses too. Experience seems to show that small men, whether acting singly or in combination, shrink from great risks, and that the courage without which no man becomes a millionaire is a very useful economic quality. No one, for instance, would deny that the work of building railways is highly useful to mankind, and while the railways of Europe were

being built it was discovered by actual experiment that the millionaire contractors were the best to employ, that even if they charged extravagantly, their railways actually did get done, while the little people were pausing or failing before unexpected obstacles. Suppose a bank has four millions, its directors cannot expend three in filling up Chat Moss, for they may be robbing their shareholders, who trust to their judgment and discretion. But the contractor with four millions can pitch three into the swamp, first, because they are his own, and secondly, because if his judgment prove faulty, he has still enough left for luxury or for beginning again. "If I lose a quarter of a million," said a considerable contractor, "over that infernal bridge, I'm ruined; but if Brassey loses it he'll just build it again. *That's* the use of Brassey;"—and we do not see where the answer to that rough apology for the new millionaire is to be found. There are big, risky things to be done which are also useful things, and he is, occasionally at all events, wanted to do them. If only one could give millionaires consciences there would be a true place for them in the social fabric, even if they never gave away a penny, and were only intent on becoming billionaires. The trouble is that their consciences die, as those of most conquerors do, in the very magnitude of their transactions, which tempt them to act as if they were powers of nature, and sweep on to their ends regardless alike of human misery and of right and wrong.

The great danger from millionaires, we suspect, is one which many of our readers, will pronounce fanciful, the danger indicated in Mr. Barnato's sad

end. They tend, like despots, to go mad. The proportion of them in America who suffer from "nervous disease," or a habit of drinking contracted by efforts to keep down nervous ailment, is extraordinary, is, in fact, described by good medical authority as amounting to fifty per cent. That is always accounted for in newspapers as the result of nervous strain, of fierce anxiety, of overwork; but we are by no means sure that as unlimited power is known of itself to overtax the brain, so an unlimited command of wealth does not weaken the controlling will. The desire to do something bigger still masters them, they do not get the help despots do from counsellors, and by and by their power of action, rapid and irresponsible action, gets too much for their mental strength. We do not care, it would not, indeed, be right, to give instances; but we are greatly mistaken if many of the new millionaires are not showing a tendency to the special form of mental weakness which is called megalomania, or "les grandeurs," a desire to make their houses, their yachts, their pleasaunces, even their activities, bigger than for their own objects it is necessary they should be made. They become too conscious of their own magnificence, are too completely their own pivots, think too largely and constantly of their own relation to the world around them. Madness lies in that direction, and we should not be at all surprised some day to see a mammoth millionaire loose in the world, and doing mischief on a scale which would compel more than one country to question whether the right to spend one's own money had not limits which the owner must be prevented by force from passing.

Fatigue in Reading.—The increasing part played by reading in the life of civilized man has resulted in the wide prevalence of myopia, astigmatism, and kindred disorders. Myopia would, however, be rare if the eye were never fatigued; so a paper by Harold Griffing and S. I. Franz, in the *Psychological Review*, on the physical conditions of

fatigue in reading, and the best means of avoiding it, should be of service. From their experiments the authors conclude that the size of type is the all-important condition of visual fatigue. No type less than 1.5 mm. in height should be used, the fatigue increasing rapidly even before the size becomes as small as this.

